ORDER NO. MD0401003C1

A6

Service Manual

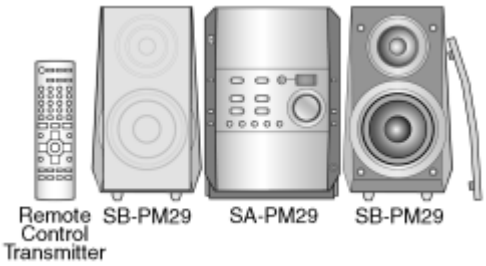
CD Stereo System

SA-PM29P

SA-PM29PC

Colour

(S)... Silver Type



Specification

Amplifier Section

FTC output power, both channels driven	
10 % , Total harmonic distortion	
60 Hz to 3 kHz	
(Low channel)	26 W per channel (6 Ω)
3 kHz to 16 kHz	
(High channel)	29 W per channel (6 Ω)
Total Bi-Amp power	55 W per channel
RMS output power, both channels driven	
10 % , Total harmonic distortion	
1 kHz (Low channel)	35 W per channel (6 Ω)
8 kHz (High channel)	35 W per channel (6 Ω)
Total Bi-Amp power	70 W per channel
Output Impedance	
Headphone	16 to 32 Ω

FM Tuner Section

Frequency range	87.5 to 108.0 MHz (0.1 MHz steps) 87.9 to 107.9 MHz (0.2 MHz steps)
Sensitivity	1.5 µ V (IHF)
Antenna terminal(s)	75 Ω (unbalanced)

AM Tuner Section

Frequency range	520 - 1710 kHz
Sensitivity	
S / N 20 dB (at 1000 kHz)	560 µ V / m

Cassette Deck Section

Track system	4-track, 2-channel
Heads	
Record / playback	Solid permalloy head
Erasure	Double gap ferrite head

Motor	DC servo motor
Recording system	AC bias 100 kHz
Erasing system	AC erase 100 kHz
Tape speed	4.8 cm / s
Overall frequency response (+ 3 dB, -6 dB) at DECK OUT)	
NORMAL (TYPE I)	35 Hz - 14 kHz
S / N	45 dB (A weighted)
Wow and flutter	0.16 % (WRMS)
Fast forward and rewind time	Approx. 120 seconds with C-60 cassette tape

CD Section

Disc played	12- and 8-cm CDs (including CD-R / RW) recorded with CD-DA, MP3, WMA, and HighMAT
Sampling frequency	
CD	44.1 kHz
MP3 / WMA	32 kHz, 44.1 kHz, 48 kHz
Bit rate	MP3: 32 kbps to 320 kbps
Decoding	16 bit linear
Pickup	
Beam source	Semiconductor laser
Wavelength	780 nm
Number of channels	Stereo
Frequency response	20Hz to 20 kHz (+ 1, -2 dB)
Wow and flutter	Below measurable limit
Digital filter	8 fs
D / A converter	MASH (1 bit DAC)

General

Power supply	AC 120 V, 60 Hz
Power consumption	130 W
Dimensions (W x H x D)	179 x 250 x 383 mm (7 1 / 16 ” x 9 27 / 32 ” x 15 3 / 32 ”)
Mass	5.44 kg (11.99 lbs)
Power consumption in standby mode	Approx 0.9 W

Notes :

1. Specifications are subject to change without notices. Mass and dimensions are approximate.
2. Total harmonic distortion is measured by the digital spectrum analyzer.
3.The labels “ HIGH (HF) ” and “ Low (LF) ” on the rear of the speakers refer to High frequency and Low frequency.

System : SC-PM29P-S	Music center: SA-PM29P-S Speaker: SB-PM29P-K
System : SC-PM29PC-S	Music center: SA-PM29PC-S Speaker: SB-PM29P-K

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⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Panasonic

1 Safety Precautions

1.1 GENERAL GUIDELINES

1. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
2. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

(This “Safety Precaution” is applied only in U.S.A.)

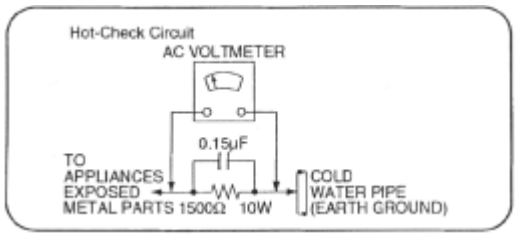
1. Before servicing, unplug the power cord to prevent an electric shock.
2. When replacing parts, use only manufacturer’s recommended components for safety.
3. Check the condition of the power cord. Replace if wear or damage is evident.
4. After servicing, be sure to restore the lead dress, insulation barriers, insulation papers, shields, etc.
5. Before returning the serviced equipment to the customer, be sure to make the following insulation resistance test to prevent the customer from being exposed to a shock hazard.

1.1.1 LEAKAGE CURRENT COLD CHECK

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis,the reading should be between 1MΩ and 5.2Ω.

   When the exposed metal does not have a return path to the chassis, the reading must be ∞ .

Fig. 1



1.1.2 LEAKAGE CURRENT HOT CHECK (See Figure 1.)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a 1.5kΩ, 10 watts resistor, in parallel with a 0.15μF capacitors, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in Figure 1.
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 or equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 milliamp. In case a measurement is outsideof the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and re-checked before it is returned to the customer.

1.1.3 Caution for fuse replacement

(For English)
CAUTION:

Replace with the same type fuse:
(Manufacturer: SOC or Hollyland, Type: 51MS or F1, 1.6A 125V)

(For Canadian French)
ATTENTION:

Utiliser un fusible de rechange de même type:
(Fabricant: SOC ou Hollyland, Type: 51MS ou F1, 1.6A 125V)

2 Before Repair and Adjustment

Disconnect AC power, discharge Power Supply Capacitors C506, C507, C508, C584, C587, C588, & C311 through a 10Ω, 5W resistor to ground.
DO NOT SHORT-CIRCUIT DIRECTLY (with a screwdriver blade, for instance), as this may destroy solid state devices.
After repairs are completed, restore power gradually using a variac, to avoid overcurrent.

- Current consumption at AC 120V, 60 Hz in NO SIGNAL mode should be ~300 mA.

3 Protection Circuitry

The protection circuitry may have operated if either of the following conditions are noticed:

- No sound is heard when the power is turned on.
- Sound stops during a performance.

The function of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are "shorted", or if speaker systems with an impedance less than the indicated rated impedance of the amplifier areused.

If this occurs, follow the procedure outlines below:

1. Turn off the power.
2. Determine the cause of the problem and correct it.
3. Turn on the power once again after one minute.

Note:

When the protection circuitry functions, the unit will not operate unless the power is first turned off and then on again.

4 Handling the Lead-free Solder

4.1 About lead free solder (PbF)

Distinction of PbF P.C.B.:

P.C.B.s (manufactured) using lead free solder will have a PbF stamp on the P.C.B.

Caution:

- Pb free solder has a higher melting point than standard solder; Typically the melting point is 50 - 70°F (30 - 40°C) higher. Please use a high temperature soldering iron. In case of soldering iron with temperature control,please set it to 700 ± 20°F (370 ± 10°C).
- Pb free solder will tend to splash when heated too high (about 1100°F/600°C).
- When soldering or unsoldering, please completely remove all of the solder on the pins or solder area, and be sure to heat the soldering points with the Pb free solder until it melts enough.

5 Precaution of Laser Diode

CAUTION:

This unit utilizes a class 1 laser.

Invisible laser radiation is emitted from the optical pickup lens.

When the unit is turned on:

1. Do not look directly into the pick up lens.
2. Do not use optical instruments to look at the pick up lens.
3. Do not adjust the preset variable resistor on the pickup lens.
4. Do not disassemble the optical pick up unit.
5. If the optical pick up is replaced, use the manufacturer's specified replacement pick up only.
6. Use of control or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

CAUTION!

THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

Inside of product

6 Handling Precautions For Traverse Deck

The laser diode in the traverse deck (optical pickup) may break down due to potential difference caused by static electricity of clothes or human body. So, be careful of electrostatic breakdown during repair of the traverse deck (optical pickup).

- **Handling of traverse deck (optical pickup)**
  1. Do not subject the traverse deck (optical pickup) to static electricity as it is extremely sensitive to electrical shock.
  2. To prevent the breakdown of the laser diode, an antistatic shorting pin is inserted into the flexible board (FFC board).
  3. Take care not to apply excessive stress to the flexible board (FFC board). When removing or connecting the short pin, finish the job in as short time as possible. (Fig 6.1)
  4. Do not turn the variable resistor (laser power adjustment). It has already been adjusted.
- **Grounding for electrostatic breakdown prevention**
  1. Human body grounding (Fig 6.2)
     Use the anti-static wrist strap to discharge the static electricity from your body.
  2. Work table grounding. (Fig 6.2)
     Put a conductive material (sheet) or steel sheet on the area where the traverse deck (optical pickup) is place, and ground the sheet.

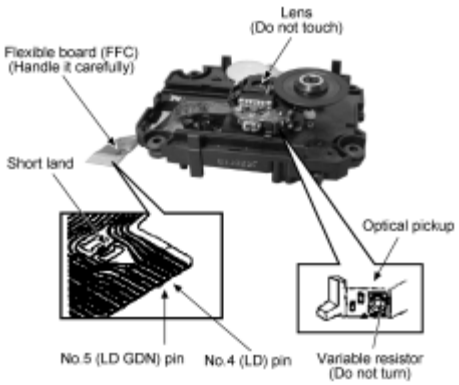
Caution:

The static electricity of your clothes will not be grounded through the wrist strap. So, take care not to let your clothes touch the traverse deck (optical pickup).

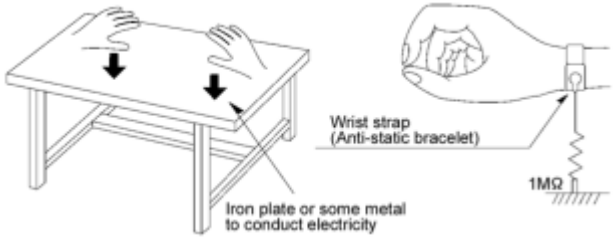
Caution when replacing the Traverse Deck

The traverse deck has a short point shorted with solder to protect the laser diode against electrostatics breakdown. Be sure to remove the solder from the short point before making connections.

(Fig 6.1)



(Figs 6.2)



7 Accessories

Note : Refer to Packing Materials & Accessories for part number.

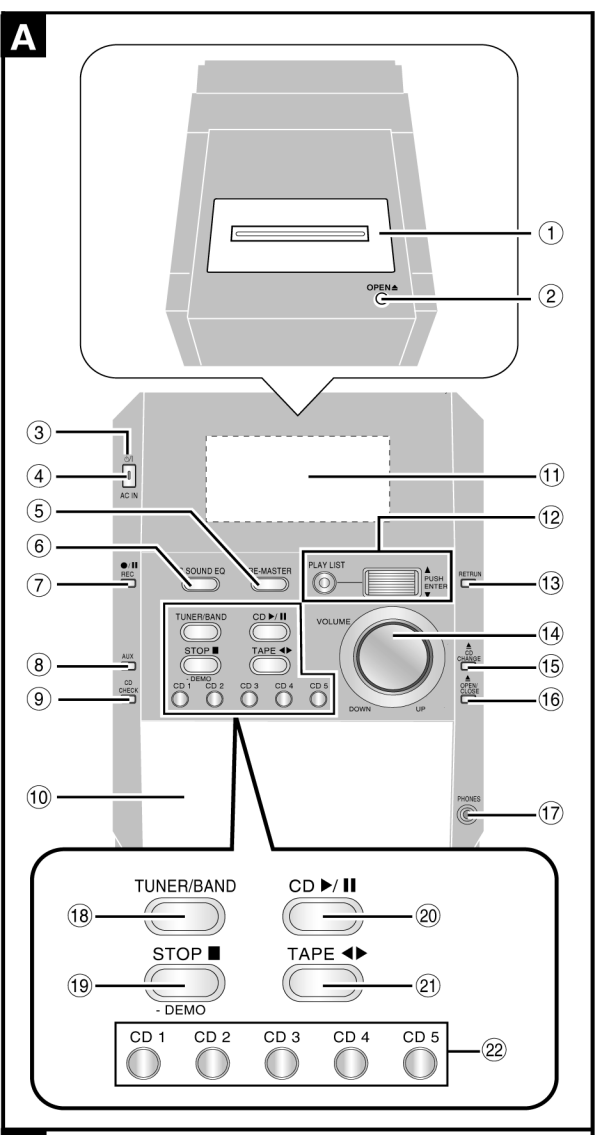
Remote Control Transmitter

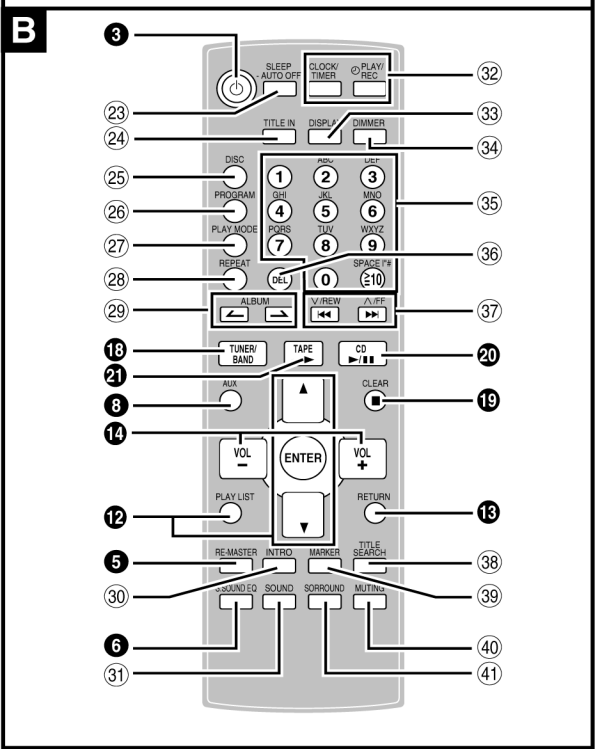
AC power supply cord

FM indoor antenna

AM Loop antenna

8 Operation Procedures





Main unit

① **Cassette lid**
② **Cassette open button (⏏ OPEN)**
③ **Standby/on switch (⏻/I)**
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.
④ **AC supply indicator (AC IN)**
This indicator lights when the unit is connected to the AC mains supply.
⑤ **Re-master button (RE-MASTER)**
⑥ **Super sound EQ button (S.SOUND EQ)**
⑦ **Recording start/pause button (●/❚❚ REC)**
⑧ **Aux button (AUX)**
⑨ **CD check button (CD CHECK)**
⑩ **CD trays**
⑪ **Display**
⑫ **Play list button and jog control (PLAY LIST)**
⑬ **Return button (RETURN)**
⑭ **Volume control**
⑮ **CD change button (⏏ CD CHANGE)**
⑯ **CD tray open/close button (⏏ OPEN/CLOSE)**
⑰ **Headphone jack (PHONES)**
⑱ **Tuner/band select button (TUNER/BAND)**
⑲ **Stop/program clear and demonstration button (STOP ■, -DEMO)**
⑳ **CD play/pause button (CD ▶/❚❚)**
㉑ **Tape play/direction button (TAPE ◀▶)**
㉒ **Disc direct play buttons (CD 1 - CD 5)**

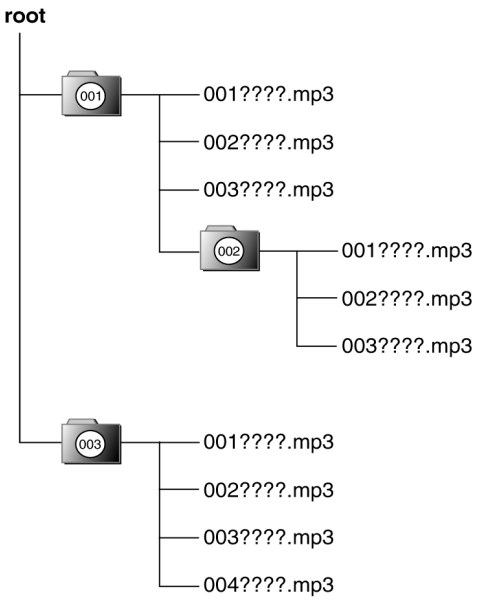
Remote Control

Buttons such as ❸ function in exactly same way as the buttons on the main unit.

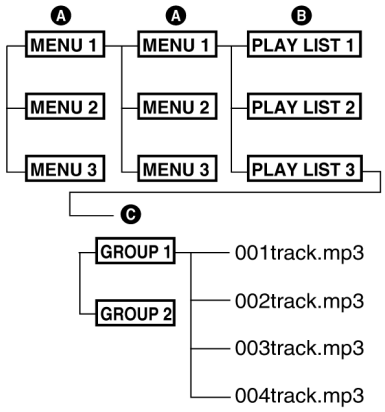
㉓ **Sleep timer, Auto off button (SLEEP, - AUTO OFF)**
㉔ **Title in button (TITLE IN)**
㉕ **Disc button (DISC)**
㉖ **CD Program/clear, tuner preset button (PROGRAM)**
㉗ **Play mode select button (PLAY MODE)**
Use this for selecting CD play mode, tune mode, FM mode, AM beat proof function and tape reverse mode.
㉘ **Repeat button (REPEAT)**
㉙ **Album select button (ALBUM ↙ ↘)**
㉚ **Intro button (INTRO)**
㉛ **Preset EQ/Manual EQ button (SOUND)**
㉜ **Clock/Timer operation buttons (CLOCK/TIMER, PLAY/REC)**
㉝ **Display button (DISPLAY)**
㉞ **Dimmer button (DIMMER)**
㉟ **Numbered, character buttons**
㊱ **Delete button (DEL)**
㊲ **CD skip/search, tape fast-forward/rewind/TPS, tune preset channel select, time adjust buttons (I◀◀ ∨/REW, ▶▶I ∧/FF)**
㊳ **Title search button (TITLE SEARCH)**
㊴ **Marker memory/recall button (MARKER)**
㊵ **Muting button (MUTING)**
㊶ **Surround button (SURROUND)**

9 Information on MP3 & WMA

Example: MP3



ⓒ **Example HighMAT disc with MP3**



MP3 and WMA

Basic operations are the same as for CD-DA.

- The folder and file names you enter on the computer become the album and track names on this unit.
- There can be a maximum of 400 albums and 999 tracks.
- Folders that do not contain MP3/WMA are skipped.
- This unit is compatible with multisession, but if the number of sessions is large, it may take longer for play to start.

Disc format

Discs must conform to ISO9660 level 1 or 2 (except for extended formats).

File format

- MP3 files must have the extension ".MP3" or ".mp3".
- WMA files must have the extension ".WMA" or ".wma".

To play in a certain order

Prefix the folder and file names with 3-digits numbers in the order you want to play them.

Files may not be recorded in numbered order if the prefixes have different numbers of digits.

For example: 1????.mp3, 2????.mp3, 10????.mp3.

However, some writing software may also cause recording to occur in a different order.

Limitations on MP3/WMA play

- This unit is not compatible with packet-write format.
- This unit is not compatible with ID3 tags.
- If you have recorded MP3/WMA on the same disc as CD-DA, only the format recorded in the first session can be played.
- Recordings will not necessarily be played in the order you recorded them.
- You cannot search while playing MP3/WMA. Program and random play work only within a single disc.

Note

- You cannot play protected WMA tracks ("TRACK PROTECTED" appears). Consult the creator of the software you used to record the WMA tracks for details.
- Noise may occur when playing WMA files.
- It may not be able to play some CD-R/RW due to the condition of the recording.

Windows Media, and the Windows logo are trademarks, or registered trademarks of Microsoft Corporation in the United States and/or other countries.

WMA is a compression format developed by Microsoft Corporation. It achieves the same sound quality as MP3 with a file size that is smaller than that of MP3.

Designed for Windows Media™

HighMAT

HighMAT is a new way of recording and managing MP3 and WMA on CD-R/RW.

- The unit plays the tracks in play lists that you create on your computer, sorting them by artist, album, and genre.
  - Ⓐ Menu (a list of items you can use to find play lists)
  - Ⓑ Play lists
  - Ⓒ Group (a group of tracks within a play list)

- Menus can have up to 8 levels.
- You will need a computer running on Windows XP to create discs with HighMAT.

10 About HighMAT

10.1 What is HighMAT?

This word combines the abbreviations of Matsushita Electric Industrial Co., Ltd. and High Performance Media Access Technology, and is a trademark of Microsoft Corporation. The products with the HighMAT logo shown below are made according to theHighMAT standard.

HighMat is a format that allows users to save digital contents such as photographs, audio and images on a CD. This gives consistency in the way of reading data when general consumer products (such as DVD players) and PCs are used, and thus, it iseasy to operate for the user.

10.2 Why use HighMAT?

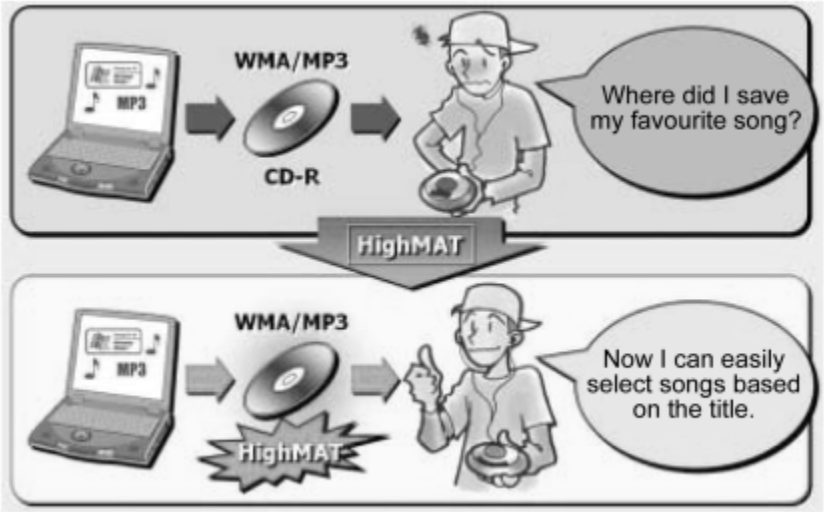
Up to now, there was no harmonized standard from playing digital content stored in CD-ROM formats (including CD-R) on consumer products like DVD players. Therefore, we used to have problems such as follow:

- There was no common play list or attached information on contents, which is called metadata.
- The data compression method differed according to the equipment.
- As the number of CD-ROMs recorded increased retrieved the contents became more difficult.
- Because display and operation methods were different depending on the equipment, the play order of the content on the same disc could change.

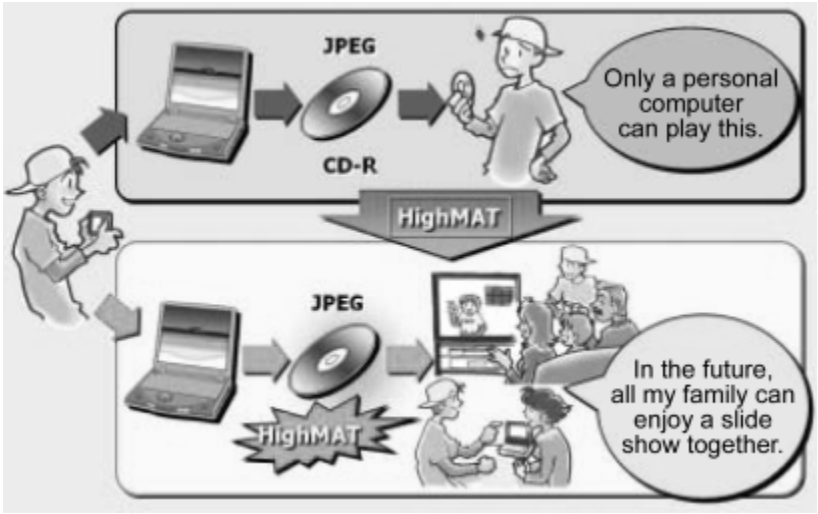
10.3 The advantages of using HighMAT

Applying the HighMAT standard will solve the following problems and will improve usability.

- It will create a common user interface for both PC and consumer products.



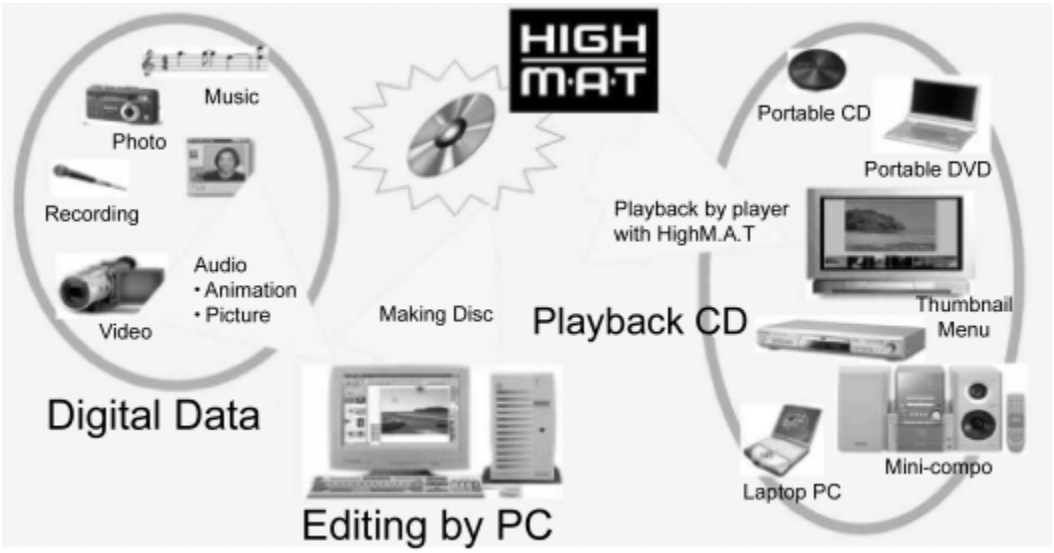
- Regardless of the types of consumer products, such as DVD players, portable CD players, car stereos and minicomputers, a consistent way to play for digital content will be created, and it will make it easier to retrieve data.



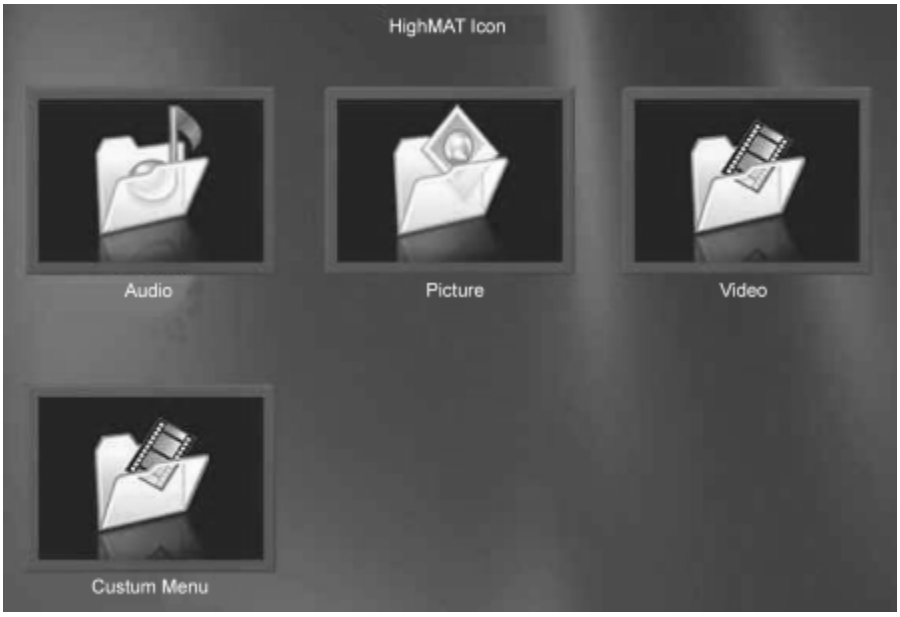
- You can also play digital content on the disc, which was created in accordance with the HighMAT format with a conventional CD-ROM player.

10.4 Outline of the HighMAT standard

1. Recording medium
   - CD-R/CD-RW
   - Supports ISO 9660 Level Expanded Joliet
   - For multiple session



2. Support data format
   - Level 1 player: WMA, MP3 (MPEG-1 Audio Layer 3)
   - Level 2 player: WMA, MP3 (MPEG-1 Audio Layer 3), JPEG
   - Level 3 player: WMA, MP3 (MPEG-1 Audio Layer 3), JPEG, WMV, MPEG4 (optional)
3. Limitation of data format
   - WMA, MP3 (MPEG-1 Audio Layer 3) 64 kbps - 160.999 kbps, 44.1 kHz, stereo, fixed bit rate/variable bit rate.
   - WMA, V2 and above, excluding Lossless/Voice/Pro
   - JPEG: Max 6M pixel, Maximum file size: 3 MB
4. Limitations regarding the number of files on the media, etc.
   - Total number of audio files: Maximum 450
   - Total number of still picture files: Maximum 999
   - Total number of animation files: Maximum 200
   - Total number of directories: Maximum 400
   - Length of a file name: Maximum 108 characters (Unicode)
   - Total number of play lists: Maximum 200
   - Number of contents in the playlist: Maximum 900
5. Composition of HighMAT disc
   - Menu: Classified for the navigation of the HighMAT digital contents. When menu selected, its submenu or the play list will be displayed.
   - Play list: A list in which one or more digital contents are arranged in order.
   - Group: Sub-divided group of a play list.
   - Digital Contents: Audio, still picture and animation data.

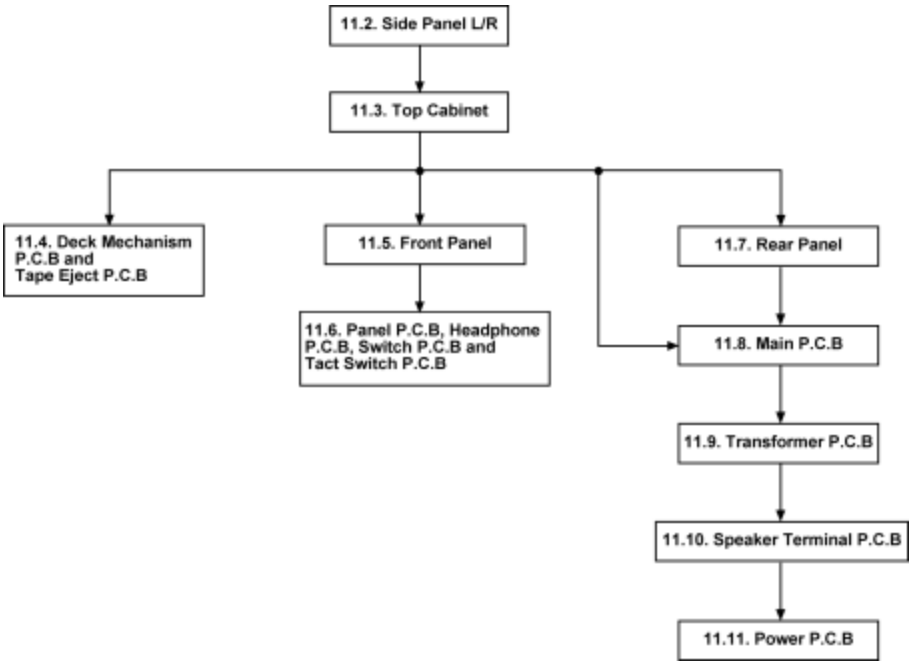

HighMAT Icon
Audio
Picture
Video
Custum Menu

11 Assembling and Disassembling

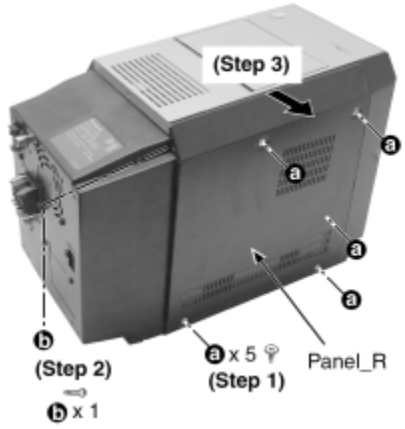
11.1 Disassembly flow chart

The following chart is the procedure for disassembling the casing and inside parts for internal inspection when carrying out the servicing.

To assemble the unit, reverse the steps shown in the chart below.


11.2. Side Panel L/R
11.3. Top Cabinet
11.4. Deck Mechanism P.C.B and Tape Eject P.C.B
11.5. Front Panel
11.6. Panel P.C.B, Headphone P.C.B, Switch P.C.B and Tact Switch P.C.B
11.7. Rear Panel
11.8. Main P.C.B
11.9. Transformer P.C.B
11.10. Speaker Terminal P.C.B
11.11. Power P.C.B

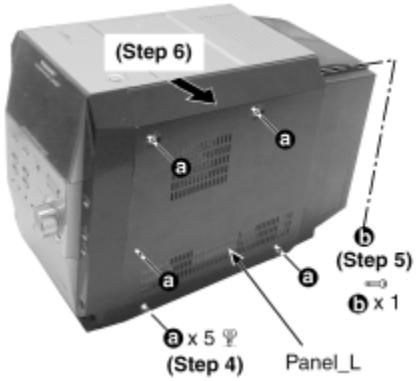
11.2 Disassembly of Side Panel L & R



Step 1 : Remove all the screws.

Step 2 : Remove the screw.

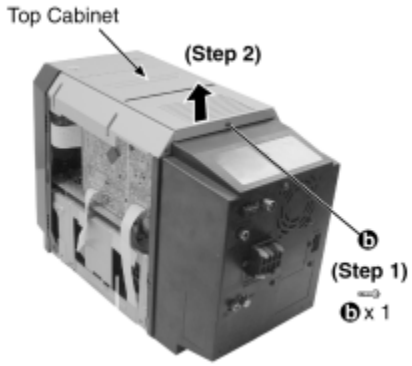
Step 3 : Remove the Panel_R as arrow shown.



Step 4 : Remove all the screws.
Step 5 : Remove the screw.
Step 6 : Remove the Panel_L as arrow shown.

11.3 Disassembly of Top Cabinet

- Follow the (Step 1) - (Step 6) of Item 11.2.

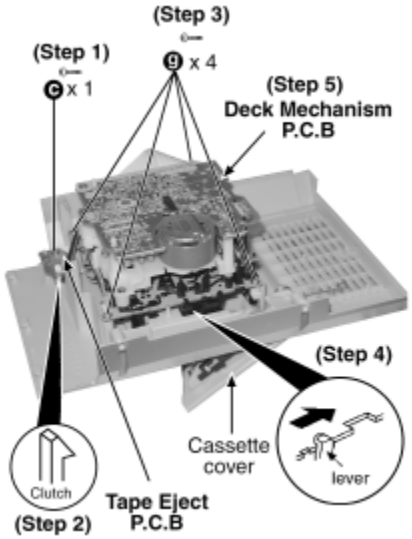


Step 1 : Remove the screw.
Step 2 : Push up the Top Cabinet as arrow shown.

Step 3 : Disconnect the FFC board (CN309).

11.4 Disassembly of Deck Mechanism P.C.B and Tape Eject P.C.B

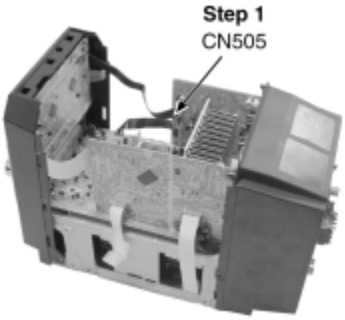
- Follow the (Step 1) - (Step 6) of Item 11.2.
- Follow the (Step 1) - (Step 3) of Item 11.3.



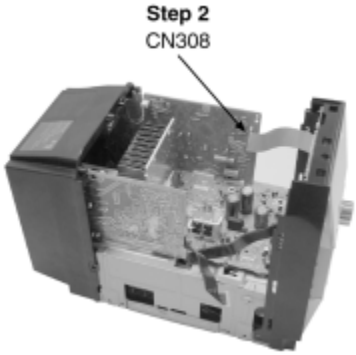
Step 1 : Remove the screw.
Step 2 : Release Clutch.
Step 3 : Remove all the screws.
Step 4 : Press the lever to open the cassette cover.
Step 5 : Remove the cassette mechanism unit.

11.5 Disassembly of Front Panel

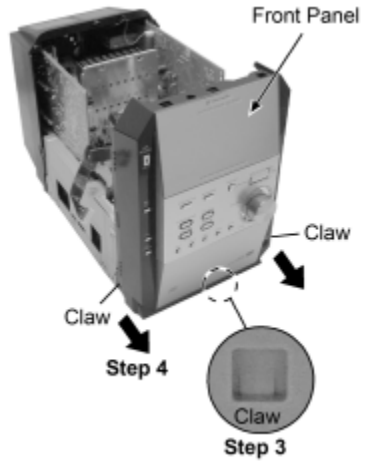
- Follow the (Step 1) - (Step 6) of Item 11.2.
- Follow the (Step 1) - (Step 3) of Item 11.3.



Step 1 : Remove the CN505 Connector.



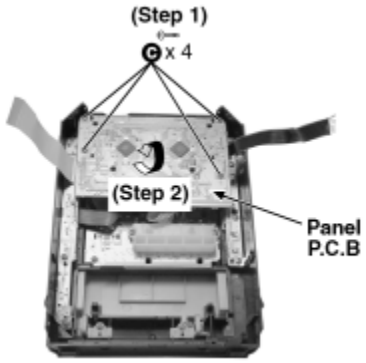
Step 2 : Remove the FFC CN308.



Step 3 : Release all the Claws.
Step 4 : Remove the Front Panel as arrow shown.

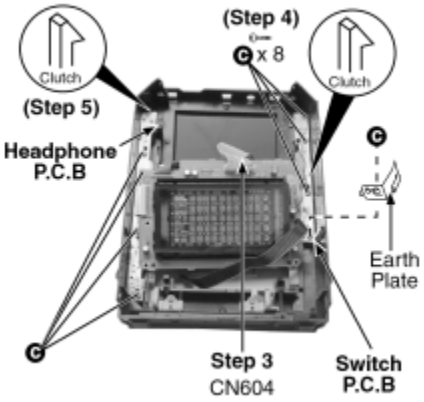
11.6 Disassembly of Panel P.C.B, Headphone P.C.B, Switch P.C.B and Tact switch P.C.B

- Follow the (Step 1) - (Step 6) of Item 11.2.
- Follow the (Step 1) - (Step 3) of Item 11.3.
- Follow the (Step 1) - (Step 4) of Item 11.5.
- Disassembly of Panel P.C.B.



Step 1 : Remove all the screws.
Step 2 : Flip over the Panel P.C.B.

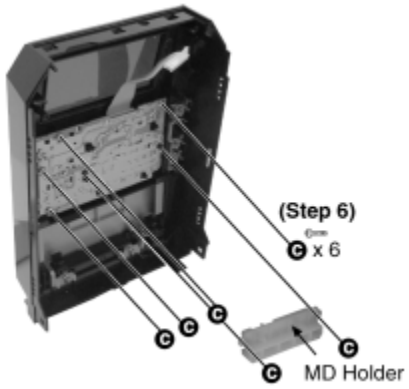
- Disassembly of Headphone P.C.B and Switch P.C.B.



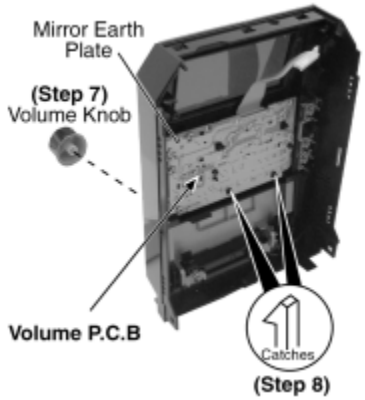
Step 3 : Remove the connector CN604.
Step 4 : Remove all the screws.

Step 5 : Release all the catches.

- Disassembly of Tact Switch P.C.B.



Step 6 : Remove all the screws.

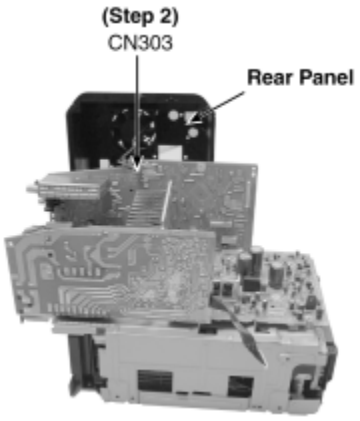


Step 7 : Remove the Volume Knob.
Step 8 : Release the Catches.

11.7 Disassembly of Rear Panel

- Follow the (Step 1) - (Step 6) of Item 11.2.
- Follow the (Step 1) - (Step 3) of Item 11.3.
- Follow the (Step 1) - (Step 4) of Item 11.5.

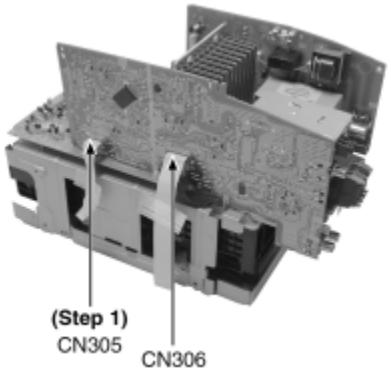
Step 1 : Remove all the screws.



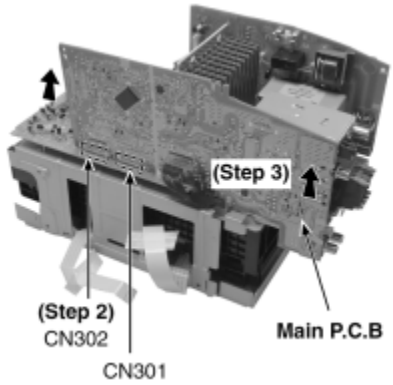
Step 2 : Release the connector CN303.

11.8 Disassembly of Main P.C.B

- Follow the (Step 1) - (Step 6) of Item 11.2.
- Follow the (Step 1) - (Step 3) of Item 11.3.
- Follow the (Step 1) - (Step 4) of Item 11.5.
- Follow the (Step 1) - (Step 2) of Item 11.7.



Step 1 : Release all the connector CN305 & CN306.

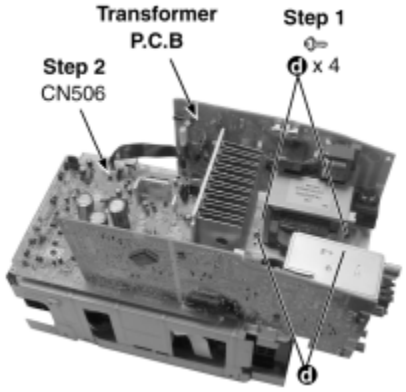


Step 2 : Detach FFC Board (CN301 and CN302).
Step 3 : Lift up the Main P.C.B as arrow shown.

11.9 Disassembly of Transformer P.C.B

- Follow the (Step 1) - (Step 6) of Item 11.2.
- Follow the (Step 1) - (Step 3) of Item 11.3.
- Follow the (Step 1) - (Step 4) of Item 11.5.
- Follow the (Step 1) - (Step 2) of Item 11.7.

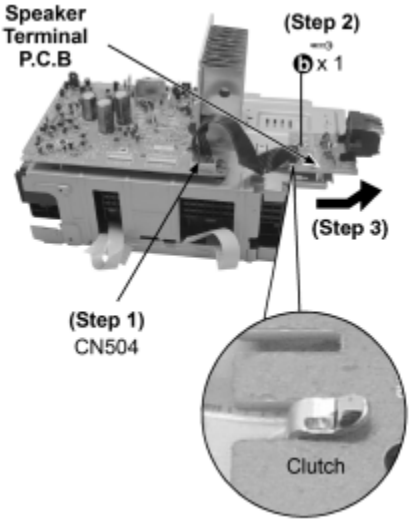
- Follow the (Step 1) - (Step 3) of Item 11.8.



Step 1 : Remove all the screws.
Step 2 : Release the connector CN506.

11.10 Disassembly of Speaker Terminal P.C.B

- Follow the (Step 1) - (Step 6) of Item 11.2.
- Follow the (Step 1) - (Step 3) of Item 11.3.
- Follow the (Step 1) - (Step 4) of Item 11.5.
- Follow the (Step 1) - (Step 2) of Item 11.7.
- Follow the (Step 1) - (Step 3) of Item 11.8.
- Follow the (Step 1) - (Step 2) of Item 11.9.

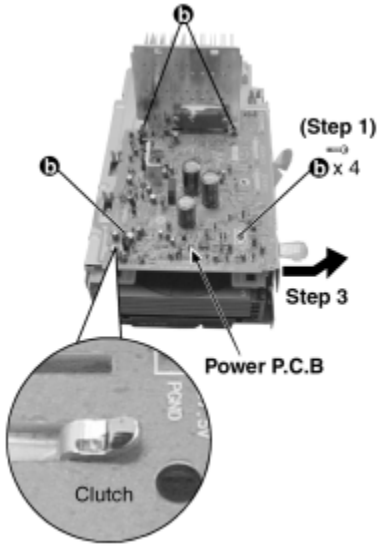


Step 1 : Release the connector CN504.
Step 2 : Remove the screw.
Step 3 : Remove the Speaker Terminal as arrow shown.

11.11 Disassembly of Power P.C.B

- Follow the (Step 1) - (Step 6) of Item 11.2.
- Follow the (Step 1) - (Step 3) of Item 11.3.
- Follow the (Step 1) - (Step 4) of Item 11.5.
- Follow the (Step 1) - (Step 2) of Item 11.7.
- Follow the (Step 1) - (Step 3) of Item 11.8.
- Follow the (Step 1) - (Step 2) of Item 11.9.

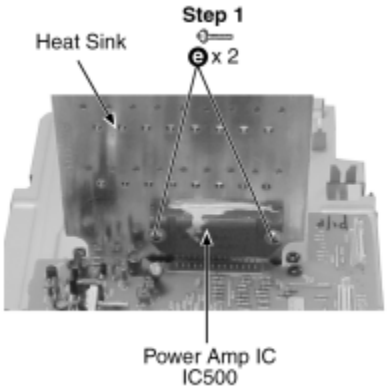
- Follow the (Step 1) - (Step 3) of Item 11.10.



Step 1 : Remove all the screws.
Step 2 : Remove the Power P.C.B as arrow shown.

11.12 Replacement of the Power Amplifier IC

- Follow the (Step 1) - (Step 6) of Item 11.2.
- Follow the (Step 1) - (Step 3) of Item 11.3.
- Follow the (Step 1) - (Step 4) of Item 11.5.
- Follow the (Step 1) - (Step 2) of Item 11.7.
- Follow the (Step 1) - (Step 3) of Item 11.8.
- **Replacement of the Power Amplifier IC**

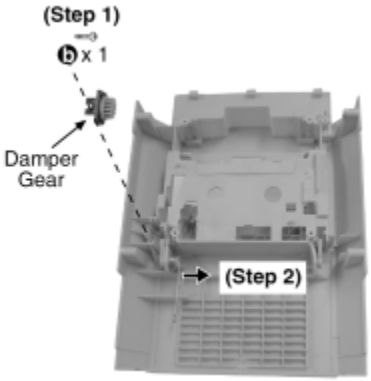


Step 1 : Remove 2 screws fixed to the Power Amp I.C.

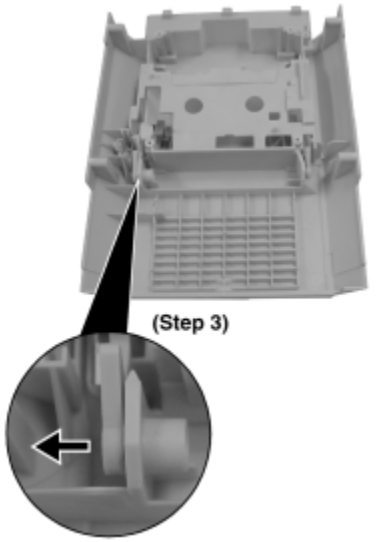
Step 2 : Unsolder the terminals of Power Amp IC, transistor and replace the component.

11.13 Procedure for Replacing Cassette Holder

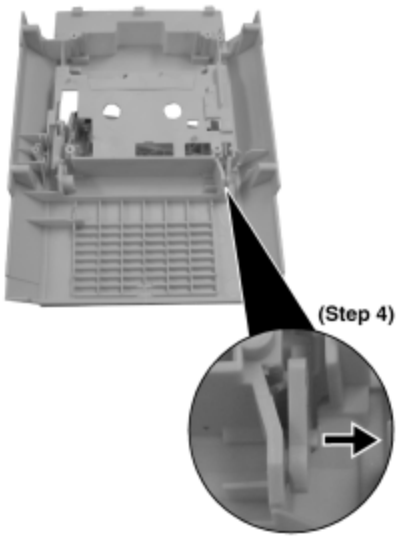
- Follow the (Step 1) - (Step 6) of Item 11.2.
- Follow the (Step 1) - (Step 3) of Item 11.3.
- Follow the (Step 1) - (Step 5) of Item 11.4.



Step 1 : Remove the screw.
Step 2 : Remove the cassette open spring as arrow shown.



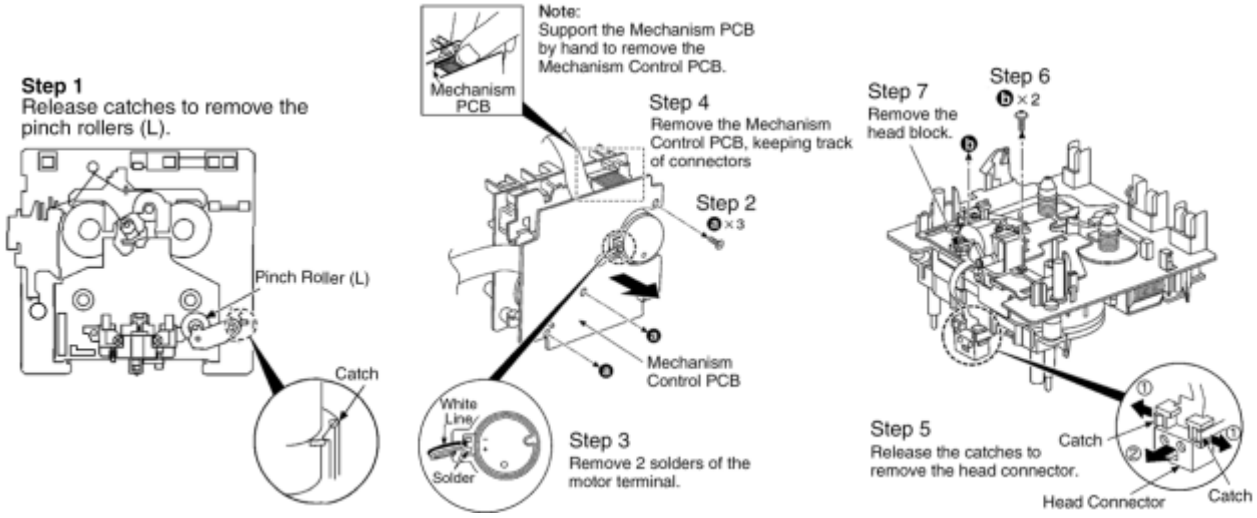
Step 3 : Remove the left cassette holder as arrow shown.



Step 4 : Remove the right cassette holder as arrow shown.

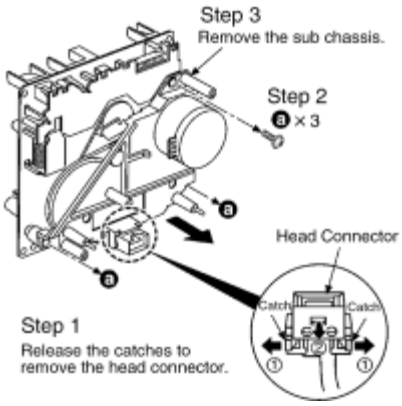
11.14 Procedure for Replacing Pinch Roller and Head Block (Cassette Mechanism Unit)

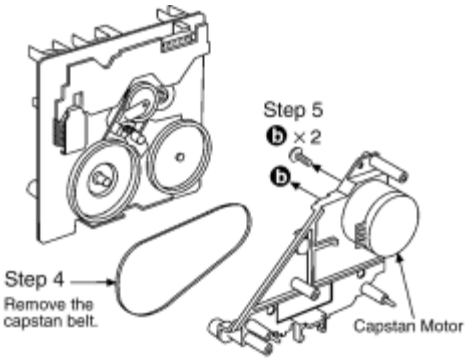
- Follow the (Step 1) - (Step 6) of Item 11.2.
- Follow the (Step 1) - (Step 3) of Item 11.3.
- Follow the (Step 1) - (Step 5) of Item 11.4.

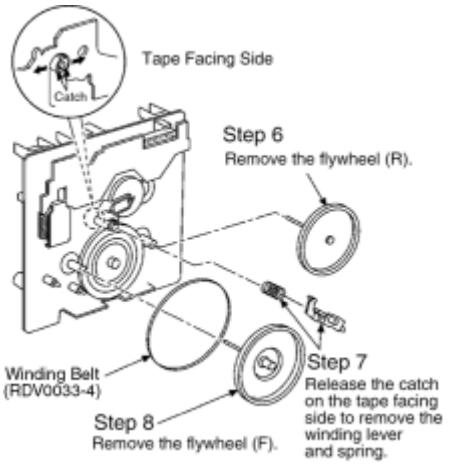


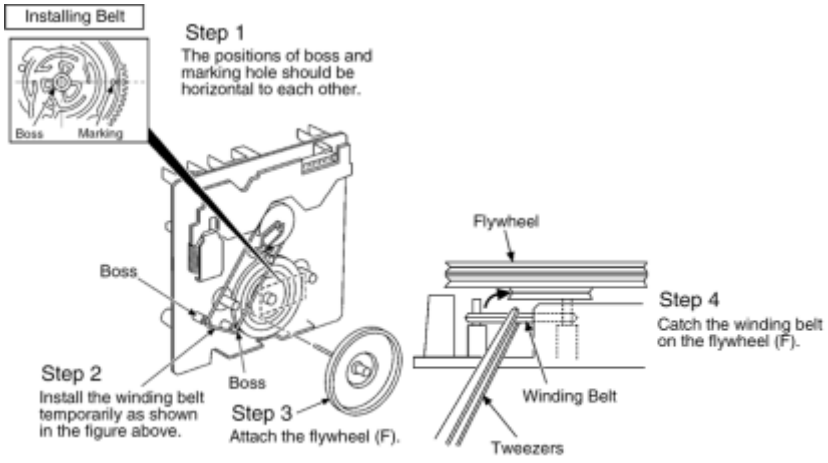
11.15 Procedure for Replacing Motor, Capstan Belt A, Capstan Belt B, and Winding Belt (Cassette Mechanism Unit)

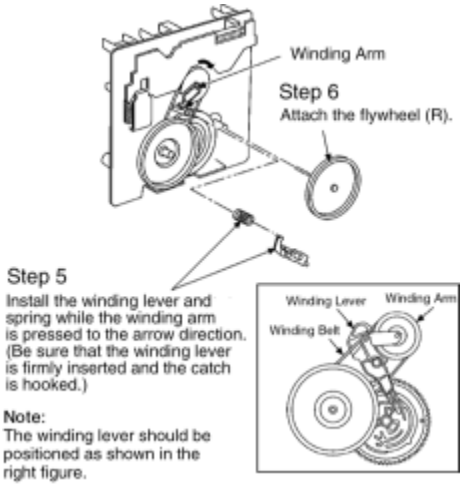
- Follow the (Step 1) - (Step 6) of Item 11.2.
- Follow the (Step 1) - (Step 3) of Item 11.3.
- Follow the (Step 1) - (Step 5) of Item 11.4.
- Follow the (Step 1) - (Step 7) of Item 11.15.

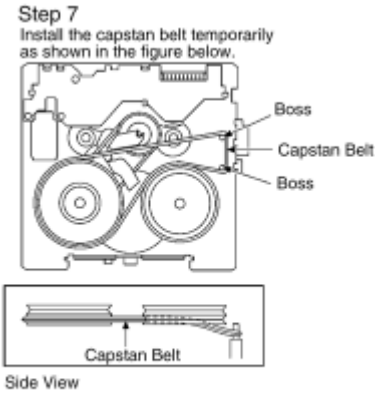

Step 3
Remove the sub chassis.
Step 2
ⓐ × 3
ⓐ
ⓐ
Head Connector
Catch
Catch
①
①
Step 1
Release the catches to remove the head connector.

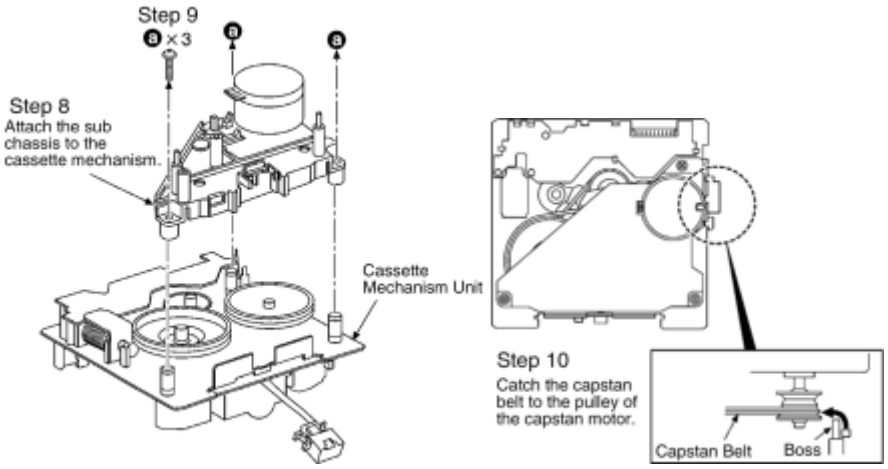

Step 5
ⓑ × 2
ⓑ
Step 4
Remove the capstan belt.
Capstan Motor


Tape Facing Side
Catch
Step 6
Remove the flywheel (R).
Winding Belt
(RDV0033-4)
Step 7
Release the catch on the tape facing side to remove the winding lever and spring.
Step 8
Remove the flywheel (F).


Installing Belt
Boss
Marking
Step 1
The positions of boss and marking hole should be horizontal to each other.
Boss
Step 2
Install the winding belt temporarily as shown in the figure above.
Boss
Step 3
Attach the flywheel (F).
Flywheel
Step 4
Catch the winding belt on the flywheel (F).
Winding Belt
Tweezers

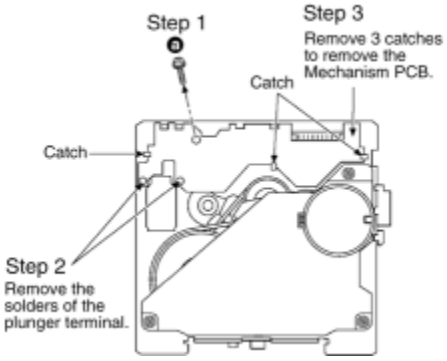

Winding Arm
Step 6
Attach the flywheel (R).
Step 5
Install the winding lever and spring while the winding arm is pressed to the arrow direction. (Be sure that the winding lever is firmly inserted and the catch is hooked.)
Winding Lever
Winding Arm
Winding Belt
Note:
The winding lever should be positioned as shown in the right figure.


Step 7
Install the capstan belt temporarily as shown in the figure below.
Boss
Capstan Belt
Boss
Capstan Belt
Side View
Note:
Keep the belt away from grease.



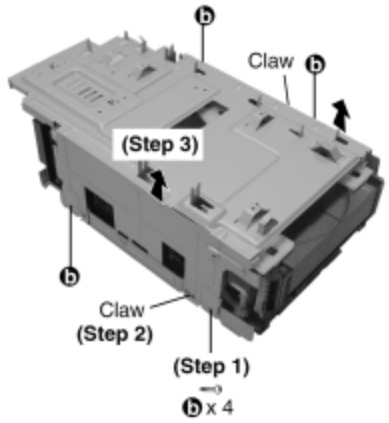
11.16 Procedure for Replacing Parts on Mechanism PCB

- Follow the (Step 1) - (Step 6) of Item 11.2.
- Follow the (Step 1) - (Step 3) of Item 11.3.
- Follow the (Step 1) - (Step 5) of Item 11.4.
- Follow the (Step 1) - (Step 7) of Item 11.15.

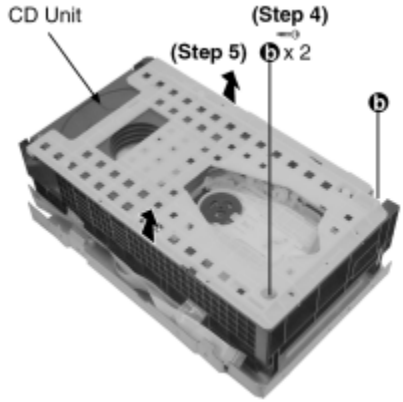


11.17 Disassembly of CR16 Mechanism

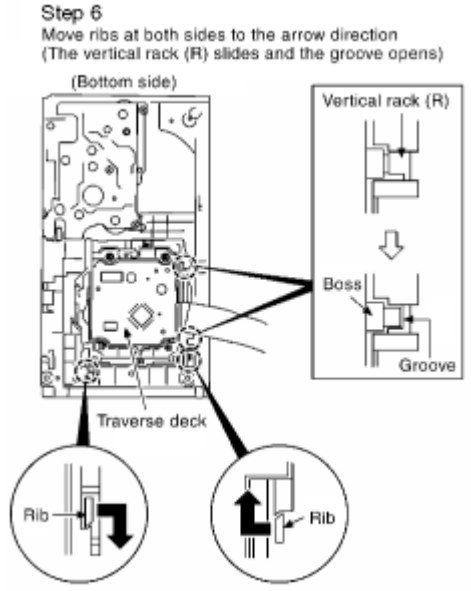
- Follow the (Step 1) - (Step 6) of Item 11.2.
- Follow the (Step 1) - (Step 3) of Item 11.3.
- Follow the (Step 1) - (Step 4) of Item 11.5.
- Follow the (Step 1) - (Step 2) of Item 11.7.
- Follow the (Step 1) - (Step 3) of Item 11.8.
- Follow the (Step 1) - (Step 2) of Item 11.9.
- Follow the (Step 1) - (Step 3) of Item 11.10.
- Follow the (Step 1) - (Step 2) of Item 11.11.

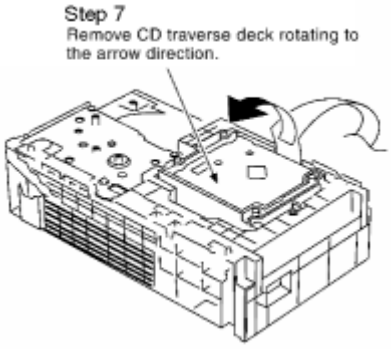


Step 1 : Remove all the screws.
Step 2 : Release all the Claws.
Step 3 : Remove the chassis as arrow shown.



Step 4 : Remove all the screws.
Step 5 : Remove the CD Unit as arrow shown.

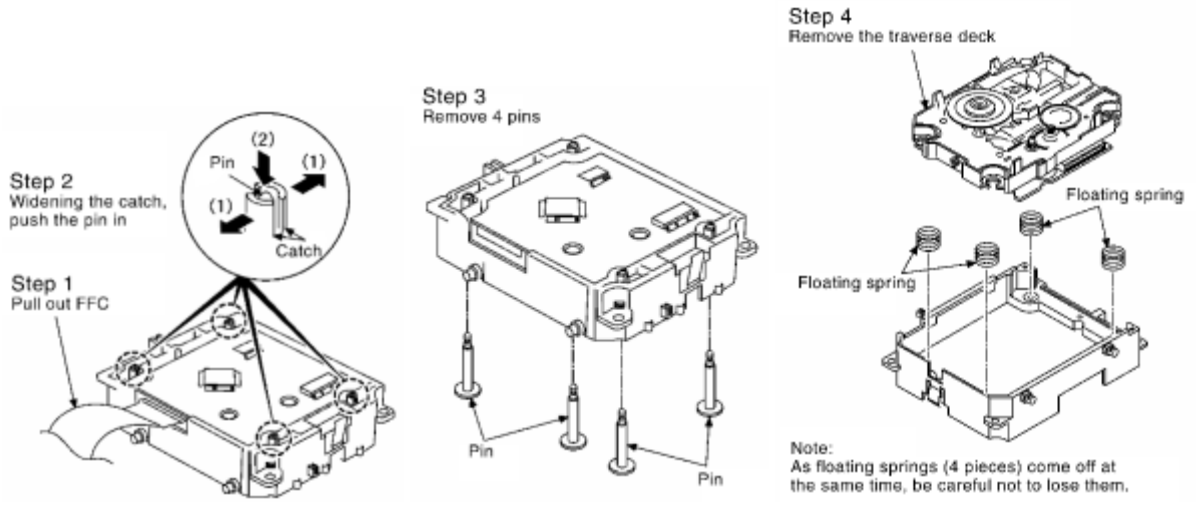


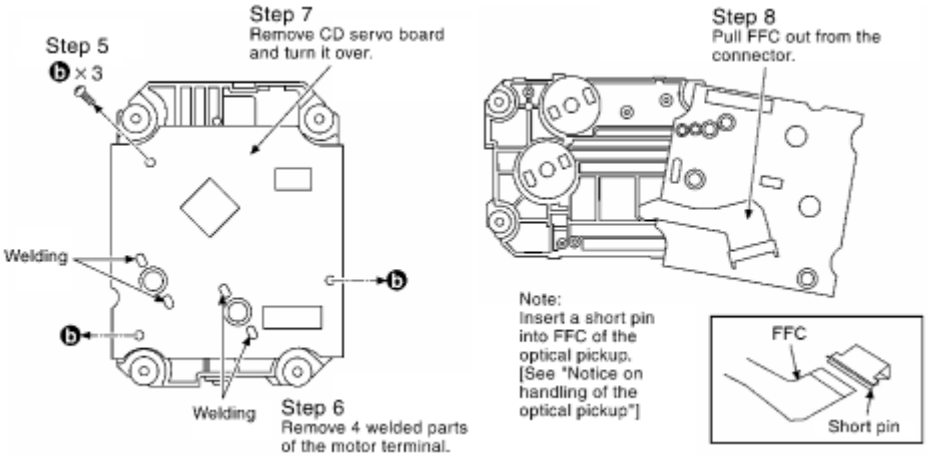


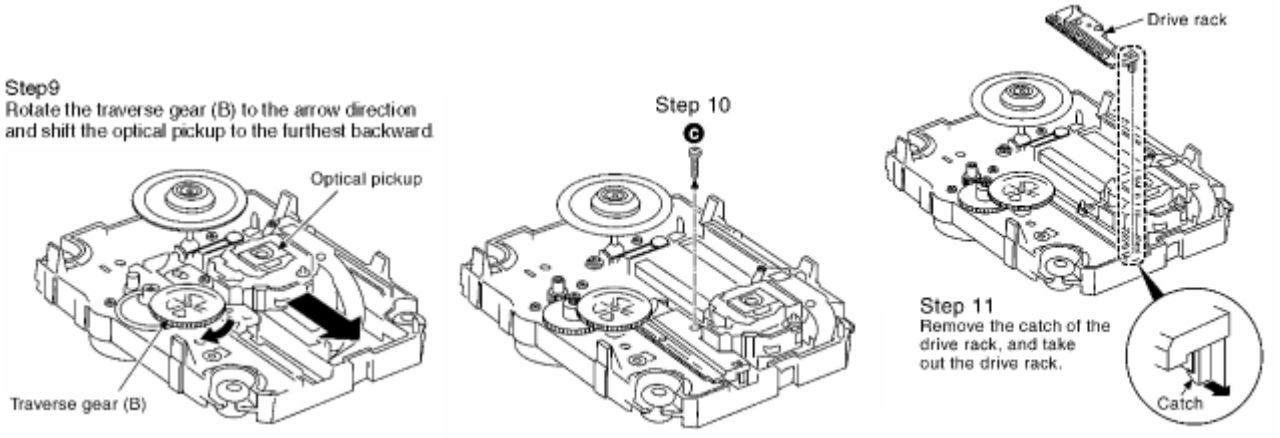
11.18 Replacement of optical pickup unit (CD mechanism)

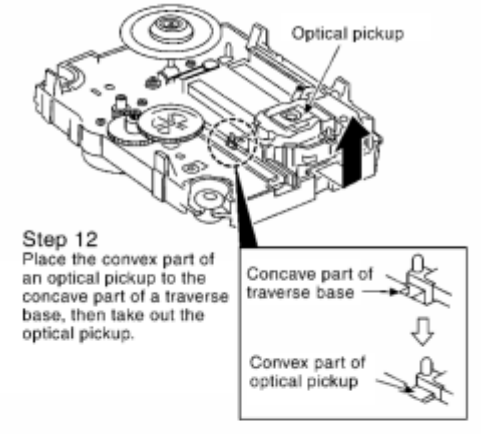
- Follow the (Step 1) - (Step 6) of Item 11.2.

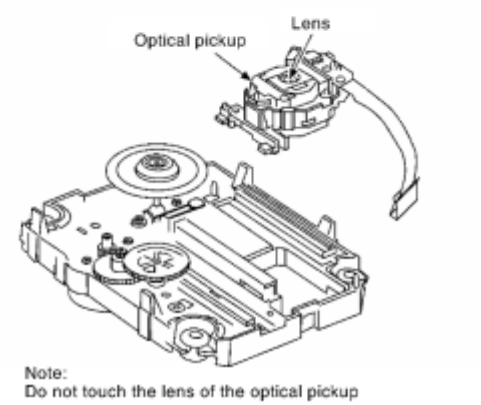
- Follow the (Step 1) - (Step 3) of Item 11.3.
- Follow the (Step 1) - (Step 4) of Item 11.5.
- Follow the (Step 1) - (Step 2) of Item 11.7.
- Follow the (Step 1) - (Step 3) of Item 11.8.
- Follow the (Step 1) - (Step 2) of Item 11.9.
- Follow the (Step 1) - (Step 3) of Item 11.10.
- Follow the (Step 1) - (Step 2) of Item 11.11.
- Follow the (Step 1) - (Step 7) of Item 11.17.




Step 7
Remove CD servo board and turn it over.
Step 5
b × 3
Welding
Welding
Step 6
Remove 4 welded parts of the motor terminal.
Step 8
Pull FFC out from the connector.
Note:
Insert a short pin into FFC of the optical pickup. [See "Notice on handling of the optical pickup"]
FFC
Short pin

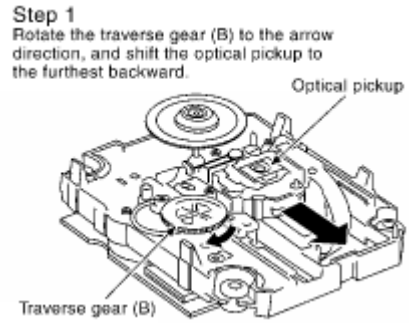

Step9
Rotate the traverse gear (B) to the arrow direction and shift the optical pickup to the furthest backward
Optical pickup
Traverse gear (B)
Step 10
c
Drive rack
Step 11
Remove the catch of the drive rack, and take out the drive rack.
Catch

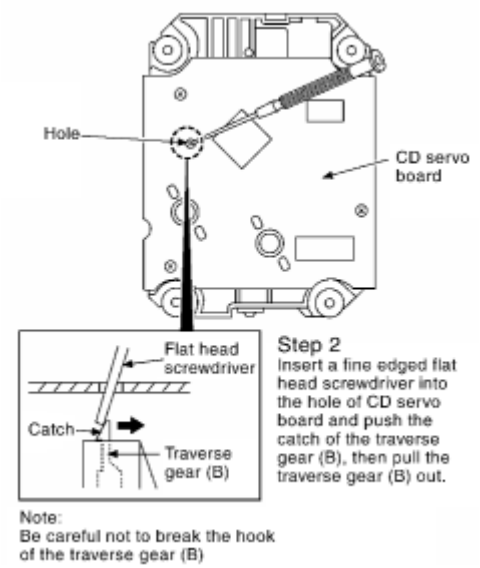

Optical pickup
Step 12
Place the convex part of an optical pickup to the concave part of a traverse base, then take out the optical pickup.
Concave part of traverse base
Convex part of optical pickup

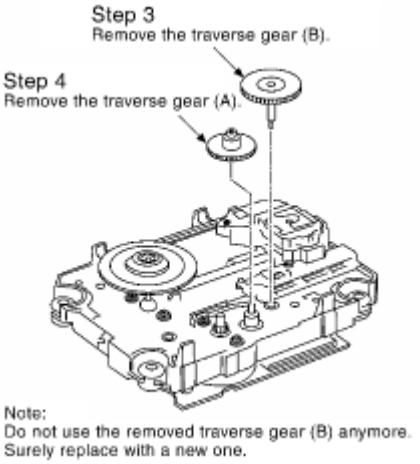


11.19 Replacement of a traverse gear A and a traverse gear B

- Follow the (Step 1) - (Step 6) of Item 11.2.
- Follow the (Step 1) - (Step 3) of Item 11.3.
- Follow the (Step 1) - (Step 4) of Item 11.5.
- Follow the (Step 1) - (Step 2) of Item 11.7.
- Follow the (Step 1) - (Step 3) of Item 11.8.
- Follow the (Step 1) - (Step 2) of Item 11.9.
- Follow the (Step 1) - (Step 3) of Item 11.10.
- Follow the (Step 1) - (Step 2) of Item 11.11.
- Follow the (Step 1) - (Step 7) of Item 11.17.
- Follow the (Step 1) - (Step 12) of Item 11.18.


Step 1
Rotate the traverse gear (B) to the arrow direction, and shift the optical pickup to the furthest backward.
Optical pickup
Traverse gear (B)


Hole
CD servo board
Flat head screwdriver
Catch
Traverse gear (B)
Step 2
Insert a fine edged flat head screwdriver into the hole of CD servo board and push the catch of the traverse gear (B), then pull the traverse gear (B) out.
Note:
Be careful not to break the hook of the traverse gear (B)


Step 3
Remove the traverse gear (B).
Step 4
Remove the traverse gear (A).
Note:
Do not use the removed traverse gear (B) anymore.
Surely replace with a new one.

11.20 Procedure for removing CD loading mechanism

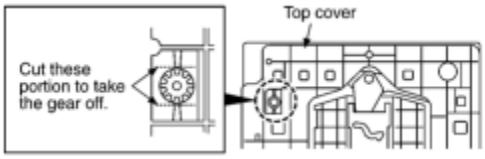
1. Turn off by pressing power SW in the body.
2. Unplug AC power cord after the indication of [GOOD-BYE], then disassemble the body.
3. Disassemble the body, and take out CD loading mechanism.
4. Perform disassembly according to the following procedure for disassembly.

11.21 CR16 mechanism disassembly procedure

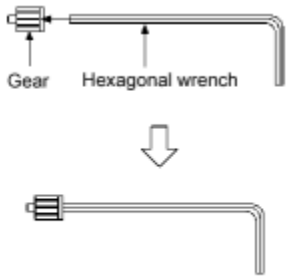
11.21.1 Gear for servicing information

- This unit has a gear which used for checking items (open/close of disc tray, up/down operation of traverse unit by manually) when servicing. (For gear information, that is described on the items for disassembly procedures.)
- For preparation of gear (for servicing), perform the procedures as follows.
- In case of re-servicing the same set, the “ gear for servicing” may be took off because it had been used. So, the “gear for servicing” must be stored.

1. Remove the gear attached to top cover of CD loading mechanism.



2. Insert the hexgonal wrench (2.5mm) into the gear.

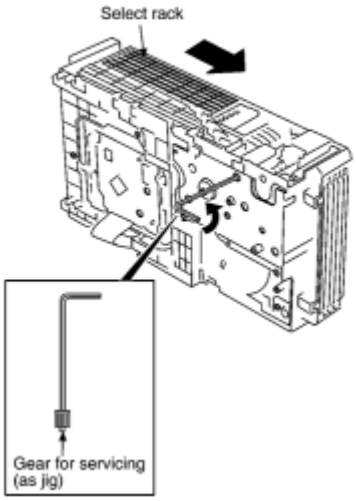


(Preparation of gear as jig is completed)

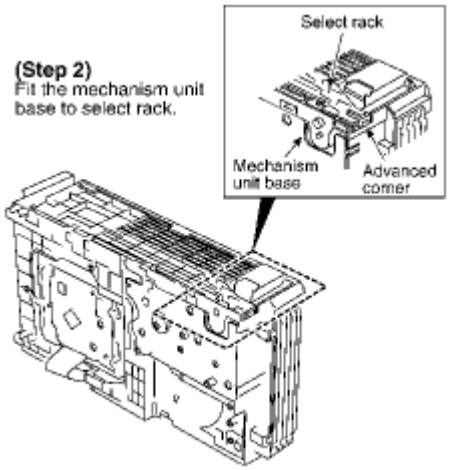
11.21.2 Replacement for the disc tray

- Follow the (Step 1) - (Step 6) of Item 11.2.
- Follow the (Step 1) - (Step 3) of Item 11.3.
- Follow the (Step 1) - (Step 4) of Item 11.5.
- Follow the (Step 1) - (Step 2) of Item 11.7.
- Follow the (Step 1) - (Step 3) of Item 11.8.
- Follow the (Step 1) - (Step 2) of Item 11.9.
- Follow the (Step 1) - (Step 3) of Item 11.10.
- Follow the (Step 1) - (Step 2) of Item 11.11.
- Follow the (Step 1) - (Step 7) of Item 11.17.

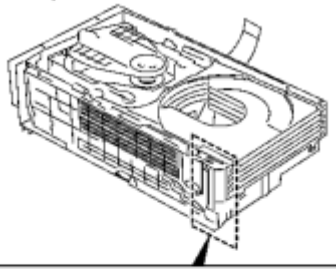
(Step 1)
Rotate the gear for servicing and move the select rack to advanced corner.

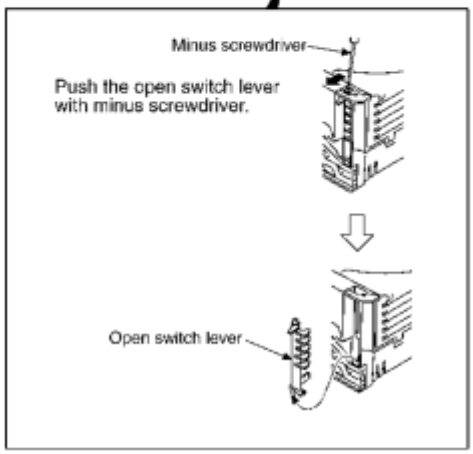


(Step 2)
Fit the mechanism unit base to select rack.

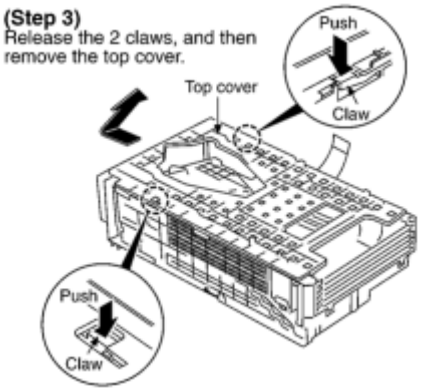


(Step 4)
Remove the open switch lever.



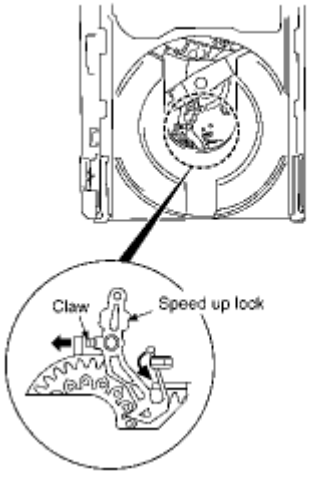


(Step 3)
Release the 2 claws, and then remove the top cover.



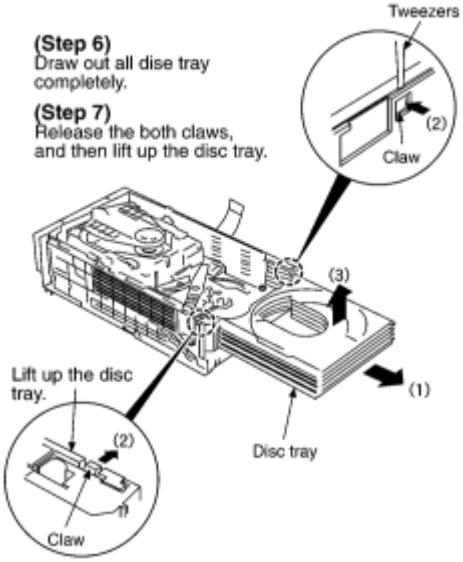
Insert the tweezers between the mechanism base and disc tray, and then lift up the disc tray.

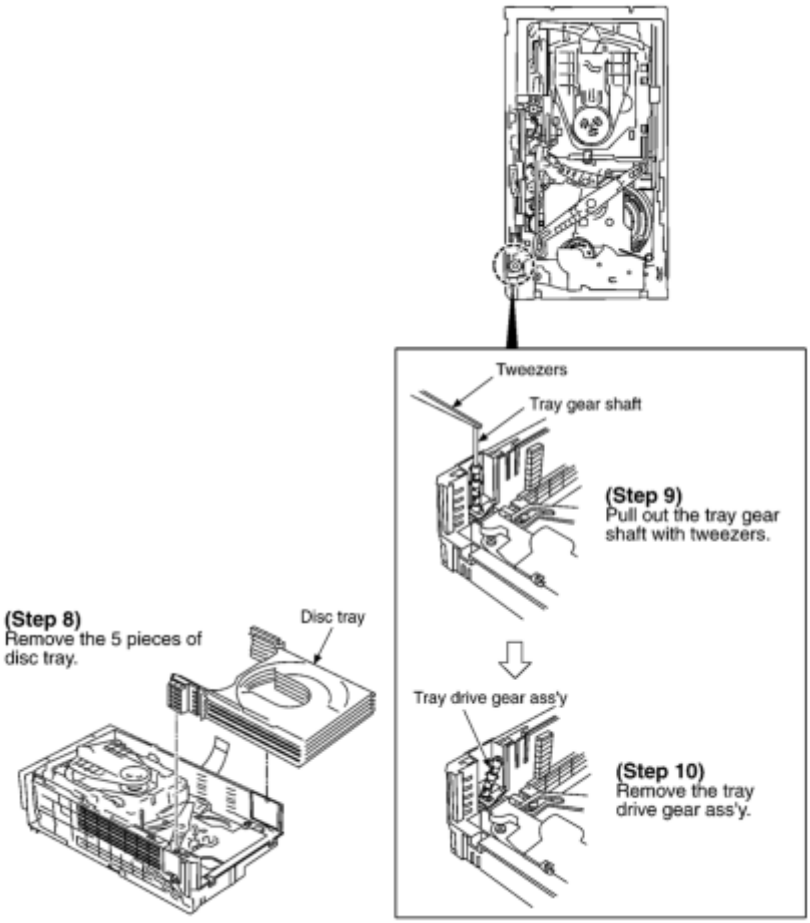
(Step 5)
Release the claw, and then remove the speed up lock.



(Step 6)
Draw out all dise tray completely.

(Step 7)
Release the both claws, and then lift up the disc tray.



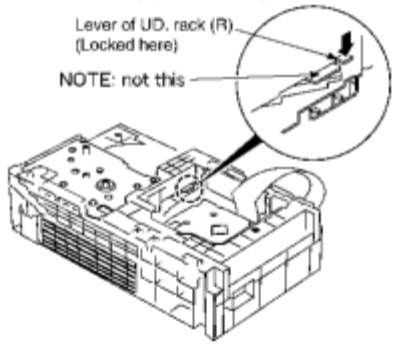


11.21.3 Replacement for the traverse deck

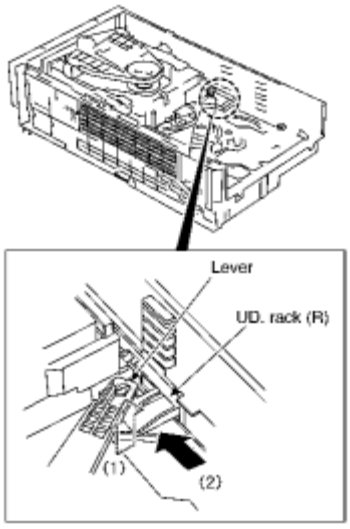
- Follow the (Step 1) - (Step 6) of Item 11.2.
- Follow the (Step 1) - (Step 3) of Item 11.3.
- Follow the (Step 1) - (Step 4) of Item 11.5.
- Follow the (Step 1) - (Step 2) of Item 11.7.
- Follow the (Step 1) - (Step 3) of Item 11.8.
- Follow the (Step 1) - (Step 2) of Item 11.9.
- Follow the (Step 1) - (Step 3) of Item 11.10.
- Follow the (Step 1) - (Step 2) of Item 11.11.
- Follow the (Step 1) - (Step 7) of Item 11.17.
- Follow the (Step 1) - (Step 10) of Item 11.21.2

(Step 1)
Confirm the position for lever of UD. rack (R) to remove traverse unit.

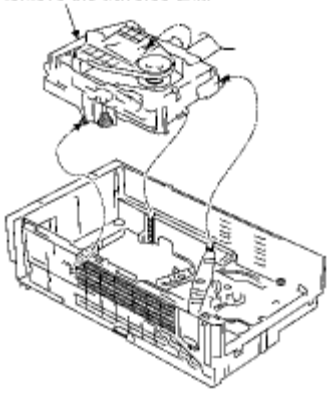
(Step 2)
Turn the unit over. (Upside: P.C.B.)



(Step 3)
Turn the unit over again, slide UD. rack (R) while pushing up the lever from the bottom.

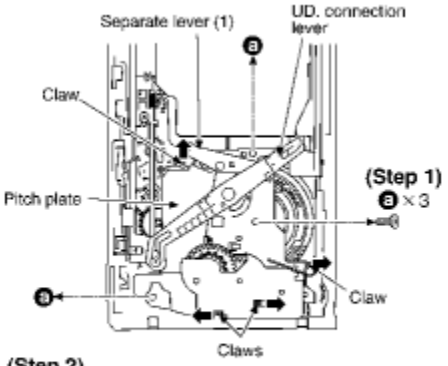


(Step 4)
Remove the traverse unit.



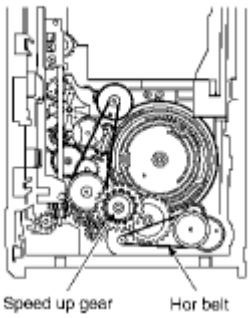
11.21.4 Disassembly for CD loading unit

- Follow the (Step 1) - (Step 6) of Item 11.2.
- Follow the (Step 1) - (Step 3) of Item 11.3.
- Follow the (Step 1) - (Step 4) of Item 11.5.
- Follow the (Step 1) - (Step 2) of Item 11.7.
- Follow the (Step 1) - (Step 3) of Item 11.8.
- Follow the (Step 1) - (Step 2) of Item 11.9.
- Follow the (Step 1) - (Step 3) of Item 11.10.
- Follow the (Step 1) - (Step 2) of Item 11.11.
- Follow the (Step 1) - (Step 7) of Item 11.17.
- Follow the (Step 1) - (Step 10) of Item 11.21.2
- Follow the (Step 1) - (Step 4) of Item 11.21.3

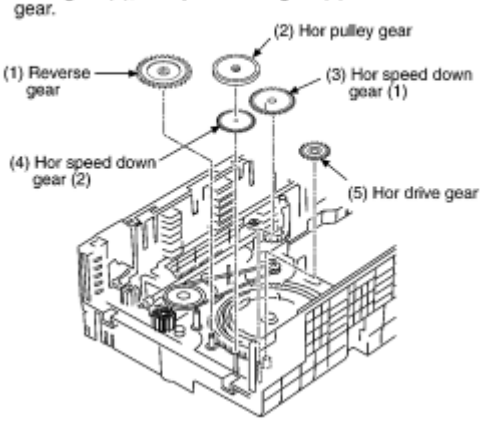


(Step 2)
Release the 4 claws, and then remove the pitch plate together with separate lever (1) and UD. connection lever.

(Step 3)
Remove the speed up gear and hor belt.

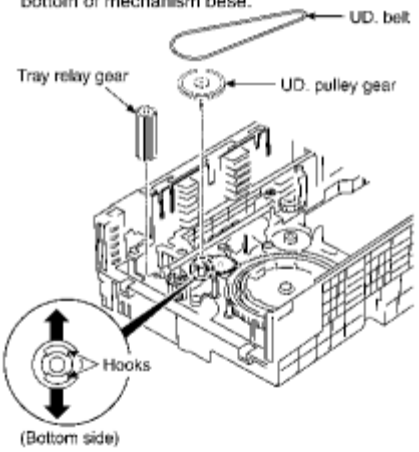


(Step 4)
Remove the reverse gear, hor pulley gear, hor speed down gear (1), hor speed down gear (2) and hor drive gear.

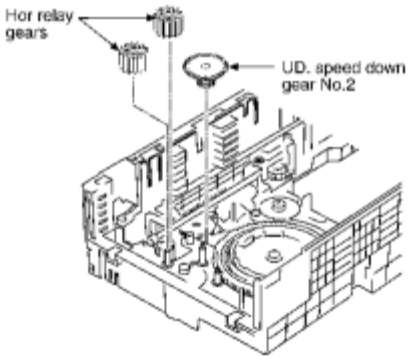


(Step 5)
Remove the UD. belt and tray relay gear.

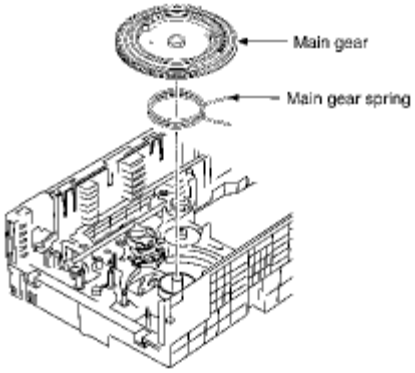
(Step 6)
Pull out the UD. pulley gear, loosen 2 hooks of the bottom of mechanism bese.



(Step 7)
Remove the 2 hor relay gears and UD. speed down gear No.2.

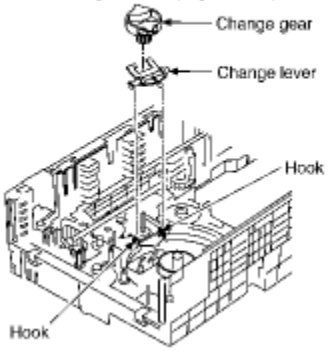


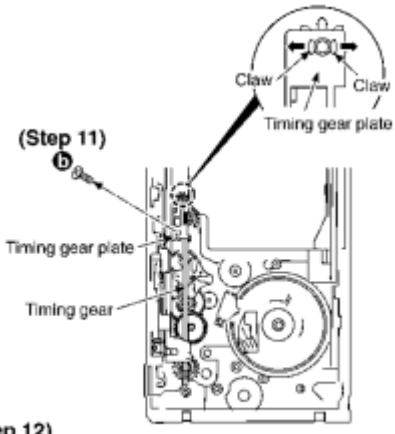
(Step 8)
Remove the main gear and main gear spring.



(Step 9)
Remove the change gear.

(Step 10)
Raise the change lever upright, and pull it out of hook.

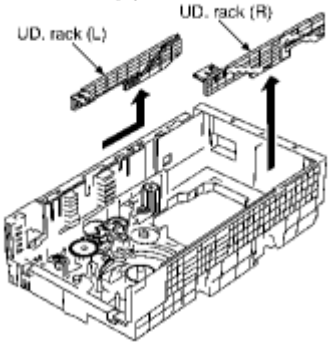




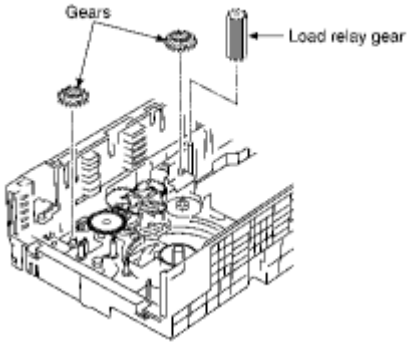
(Step 12)
Release the 2 claws, and then remove the timing gear and timing gear plate.

(Step 13)
Move the UD. rack (L) to backward, and then remove it.

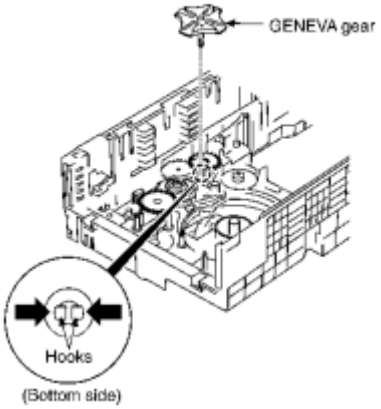
(Step 14)
Remove the UD. rack (R).



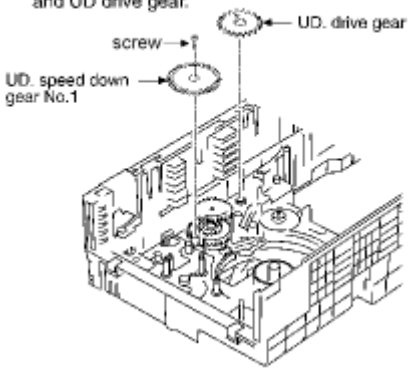
(Step 15)
Remove the 2 gears and load relay gear.



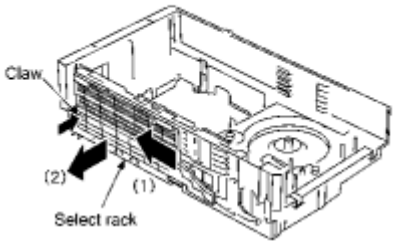
(Step 16)
Pull out the GENEVA gear, loosen 2 hooks of the bottom of mechanism base.

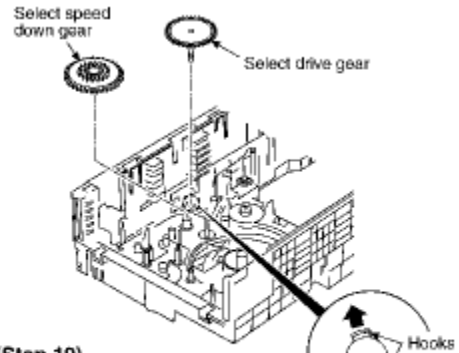


(Step 17)
Remove the UD. speed down gear No.1 and UD drive gear.



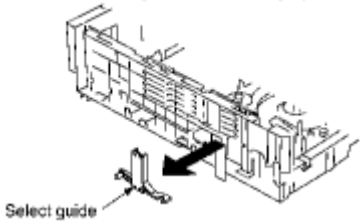
(Step 18)
Slide the select rack to the edge direction of the arrow (1). Push the claw and pull out to arrow (2) while sliding the select rack to the arrow (1).



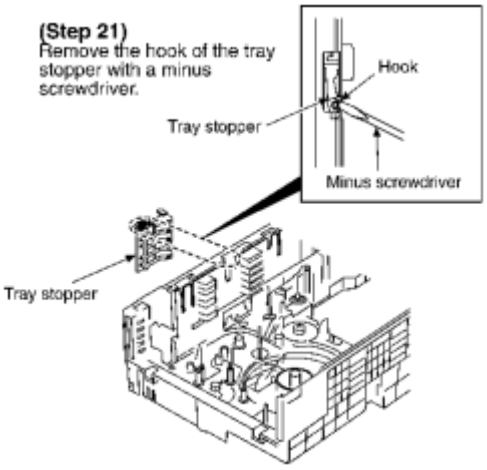


(Step 19)
Pull out the select drive gear, loosen 2 hooks of the bottom of mechanism base. Then, remove the select speed down gear.

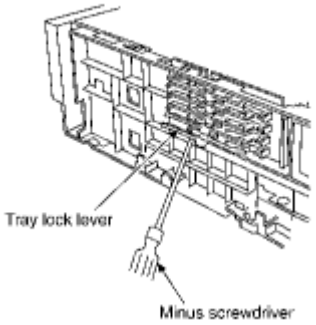
(Step 20)
Remove the select guide after sliding upside.



(Step 21)
Remove the hook of the tray stopper with a minus screwdriver.



(Step 22)
Remove the bottom of the tray lock lever with a minus screwdriver and others.



11.22 CR16 MECHANISM ASSEMBLY PROCEDURE

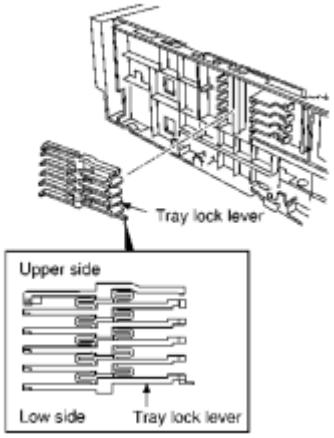
The following specified greases and/or oil must be applied when some specific parts are changed.

1. Floil grease (VFK1298) : The floil grease must be applied to tray, tray (L) and tray (R).
2. Hanarl oil (VFK1700) : The hanarl oil must be applied to any parts with grease other than the said parts.

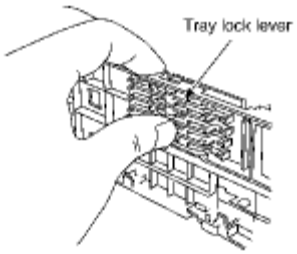
- Follow the (Step 1) - (Step 6) of Item 11.2.
- Follow the (Step 1) - (Step 3) of Item 11.3.
- Follow the (Step 1) - (Step 4) of Item 11.5.
- Follow the (Step 1) - (Step 2) of Item 11.7.
- Follow the (Step 1) - (Step 3) of Item 11.8.
- Follow the (Step 1) - (Step 2) of Item 11.9.

- Follow the (Step 1) - (Step 3) of Item 11.10.
- Follow the (Step 1) - (Step 2) of Item 11.11.
- Follow the (Step 1) - (Step 7) of Item 11.17.
- Follow the (Step 1) - (Step 10) of Item 11.21.2
- Follow the (Step 1) - (Step 4) of Item 11.21.3
- Follow the (Step 1) - (Step 22) of Item 11.21.4

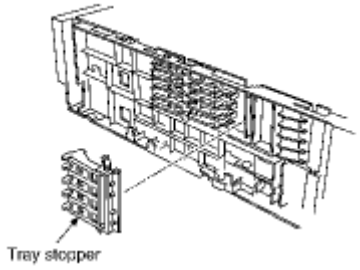
(Step 1)
Install the tray lock lever to mechanism base.



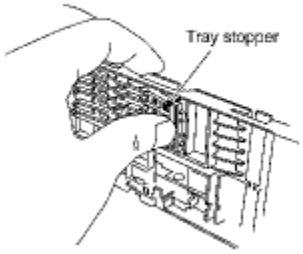
(Step 2)
Push the tray lock lever with a hand and install it.



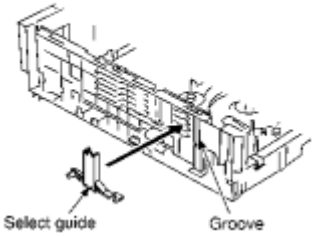
(Step 3)
Install the tray stopper to mechanism bese.



(Step 4)
Push the tray stopper with a hand and install it.

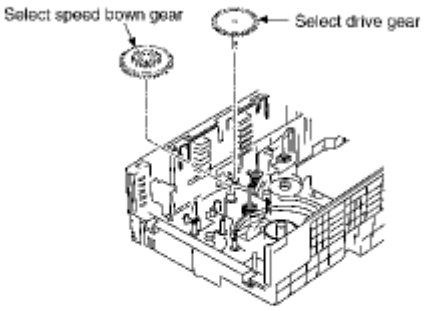


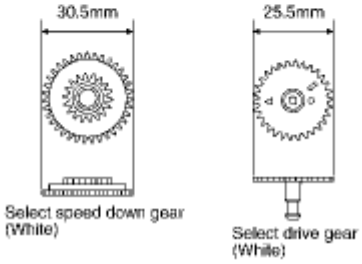
(Step 5)
Insert the select guide with a groove of the mechanism base and move it below.



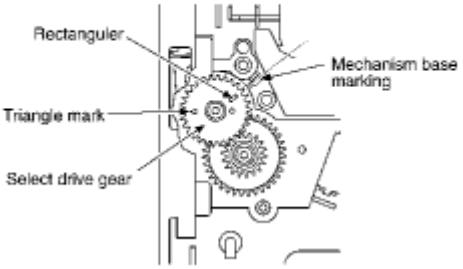
(Step 6)
Install the select speed down gear to mechanism base.

(Step 7)
Install the select drive gear to mechanism base.



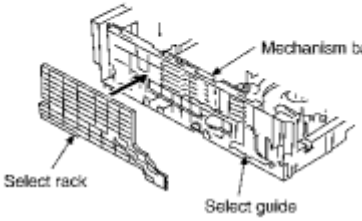


(Step 8)
Fit a mechanism base marking to the rectanguler mark of gear so that the triangle mark can indicate the sideward direction.

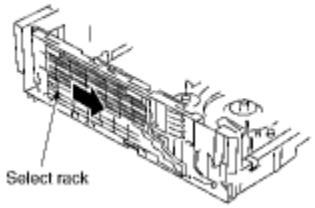


(Step 9)
Install the select rack to mechanism base.
Checking items before the installation.
1. Check select guide is completely in lowest position.
2. Check its phase of select drive gear is correct position.(Rectangle/Trianguler mark)(Refer to Step 8)

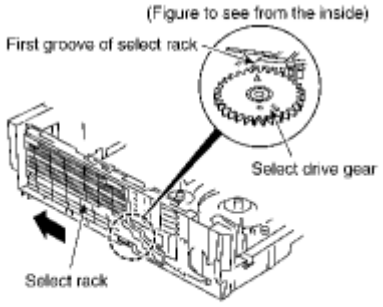
1. Put a select rack down with it fitted to its circumference of mechanism base.



2. Slide the select rack with it's pushing to a little right direction and install it.

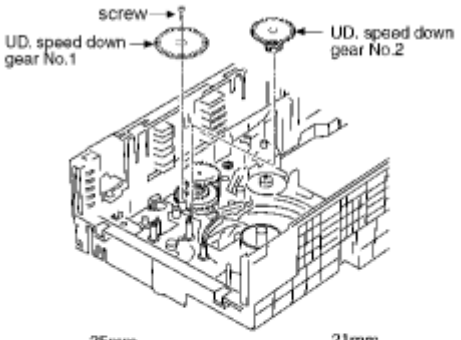


(Figure to see from the inside)

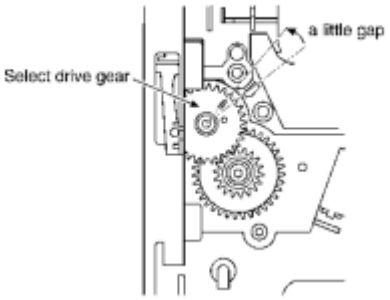


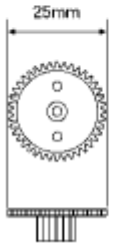
3. Check whether its end of triangular mark is in first groove of select rack, after fixing.
4. After insertion of select rack, continue the following work until the indication that it gose forward. And, all the while it must be checked that select rack is in the extreme end.

(Step 10)
Install the UD. speed down gear No.1 and UD. speed down gear No.2.

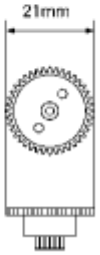


5. After insertion the select rack, the marking of select gear has a little gap when it is in the extreme end.



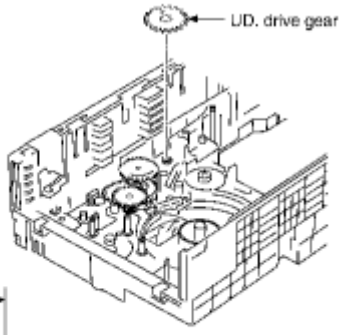


UD. speed down gear No.1
(White)



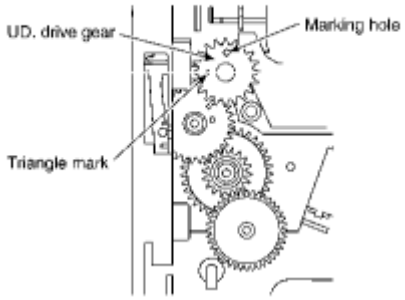
UD. speed down gear No.2
(Semi-transparent)

(Step 11)
Install the UD. drive gear to mechanism base.

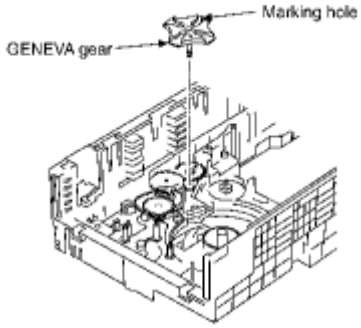


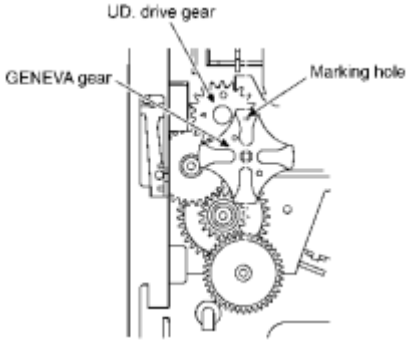
UD drive gear
(White)

(Step 12)
Insert the UD. drive gear with its marking hole upward. At that time, its triangle mark should be sideways.

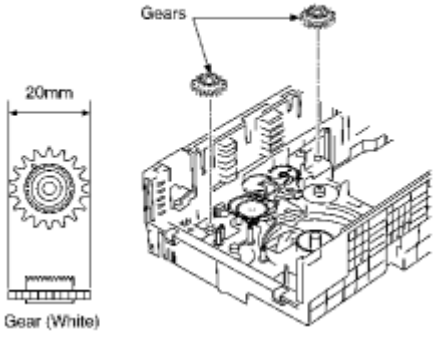


(Step 13)
Insert the GENEVA gear with its marking hole upward, and fix it by 2 hooks on bottom of mechanism base. At that time, UD. drive gear mustn't be moved.

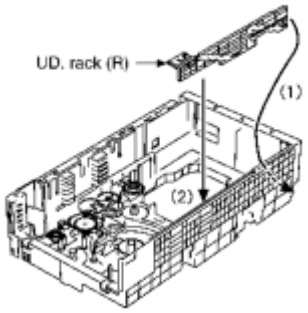




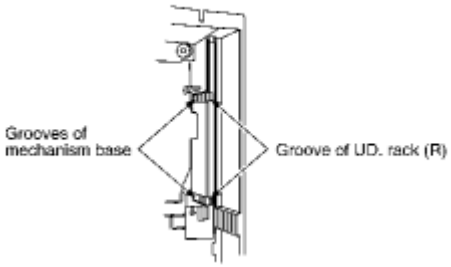
(Step 14)
Install the 2 gears to mechanism base.

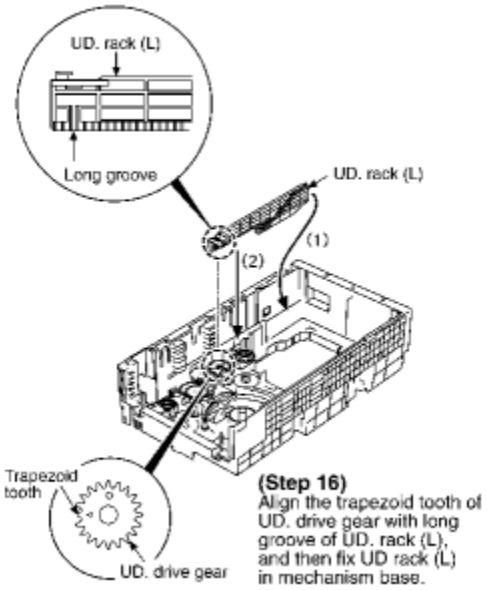


(Step 15)
Insert the UD. rack (R) to (2) from arrow (1).



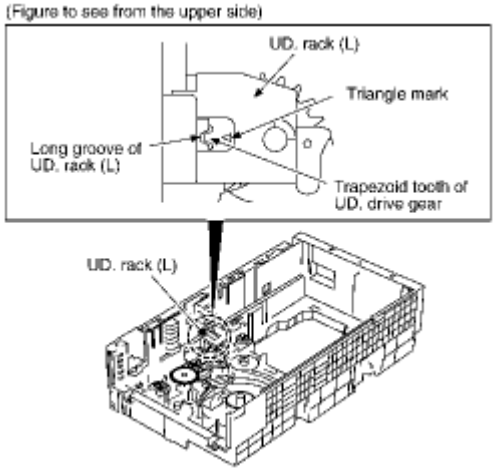
NOTE:
Put a groove of the mechanism base to the UD. rack (R).



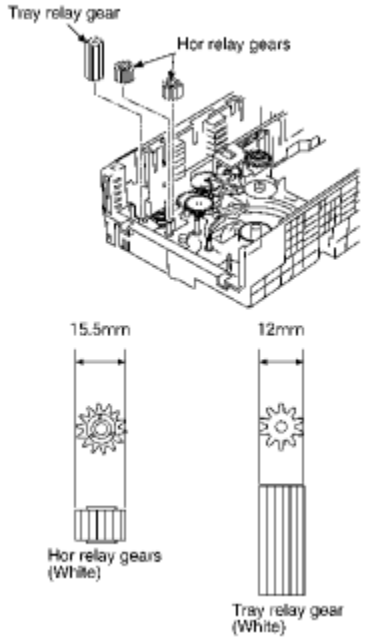


(Step 16)
Align the trapezoid tooth of UD. drive gear with long groove of UD. rack (L), and then fix UD rack (L) in mechanism base.

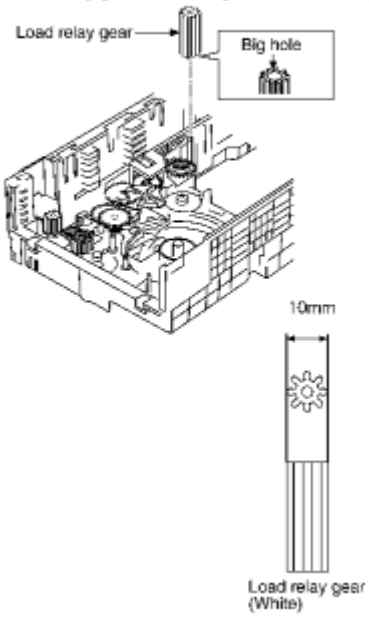
(Figure to see from the upper side)



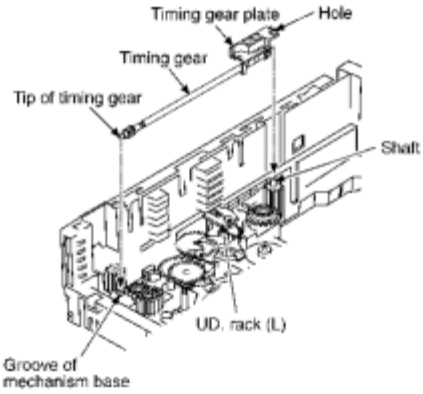
(Step 17)
Install the tray relay gear and 2 hor relay gears.



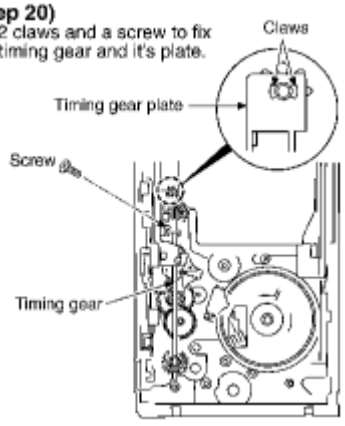
(Step 18)
Install the load relay gear to mechanism base.
(Fit load relay gear with its big hole downward.)



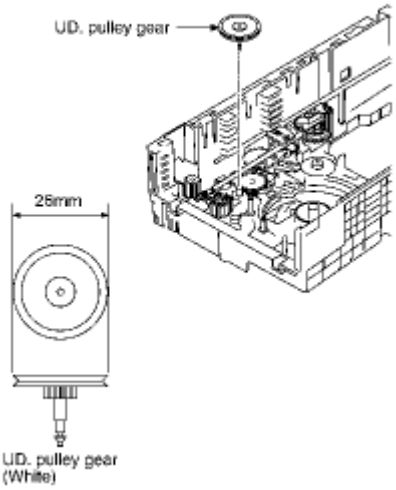
(Step 19)
Put on the top of the timing gear, then, install the timing gear and it's plate.
At that time avoid the UD. rack (L).



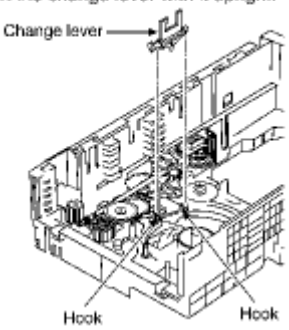
(Step 20)
Fix 2 claws and a screw to fix the timing gear and it's plate.



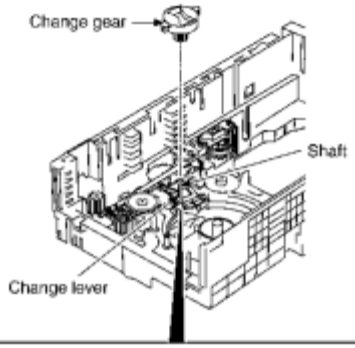
(Step 21)
Install the UD. pulley gear to mechanism base.



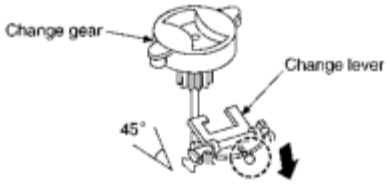
(Step 22)
Insert the change lever with it upright.



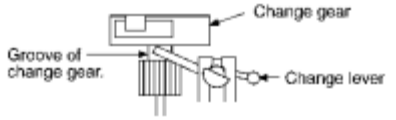
(Step 24)
Install the change gear as insert the change lever into the groove of change gear.



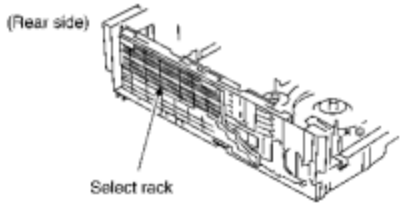
1. Pushing the ○ part and pull up the change lever 45°.

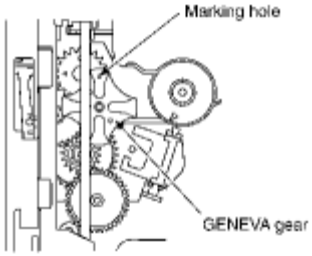


2. Insert the change lever into the groove of change gear.



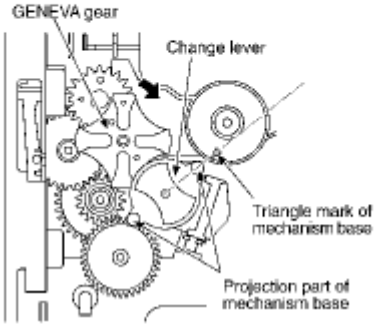
(Step 23)
Be sure the notice of bellow before fixing the change gear.
1. Select track should be in the rear of mechanism base.
2. Its hole of GENEVA gear should turn up.



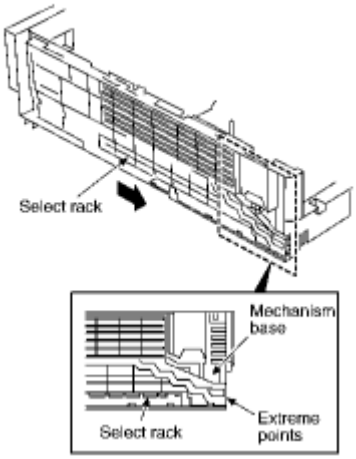


(Step 25)
Put change gear down with projection part of change gear fitted to triangle mark of mechanism base, when fixing change gear.
At that time, check change gear is inserted into the groove of change lever.

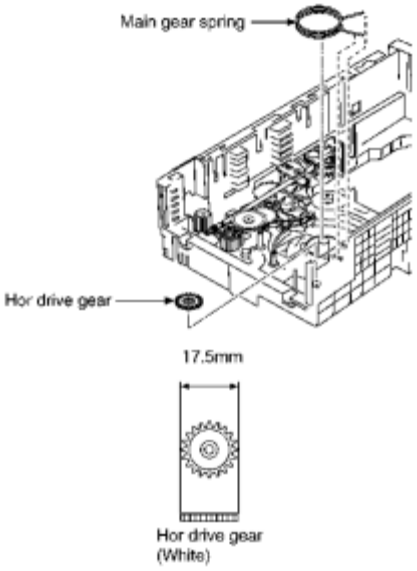
(Step 26)
Lastly, turn GENEVA gear clockwise slightly and drop change gear to mechanism base.



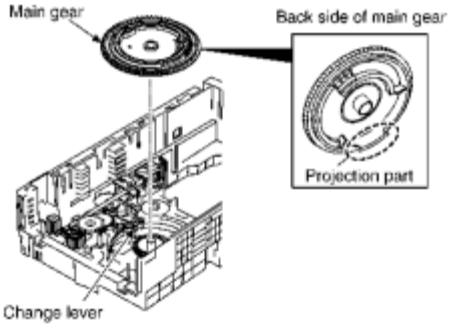
(Step 27)
Move the select rack smoothly forward manually until 2 extreme points of both select track and mechanism base.



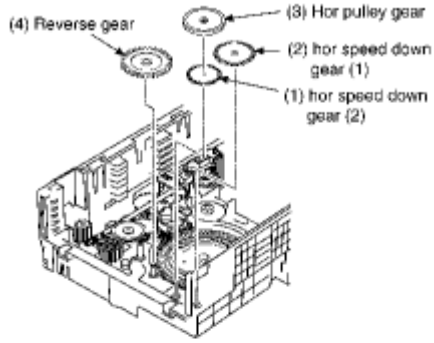
(Step 28)
Install the main gear spring and hor drive gear.

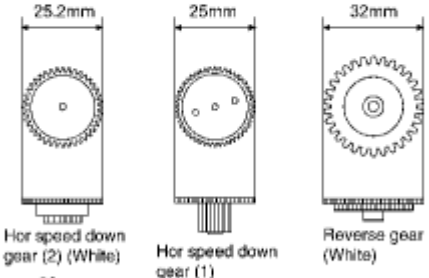


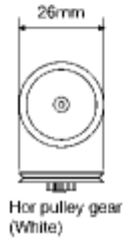
(Step 29)
Don't bring change lever into touch to projection part of main gear, when fixing main gear in mechanism base.



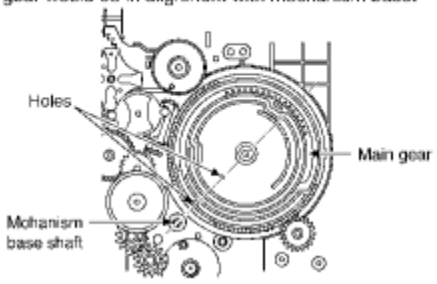
(Step 31)
Install the hor speed down gear (2), hor speed down gear (1), hor pullry gear and reverse gear.





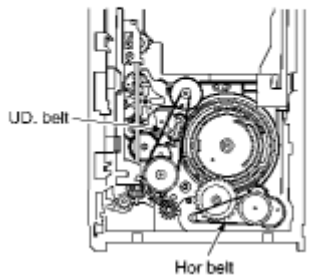


(Step 30)
After that, turn main gear so that 2 holes inside main gear would be in alignment with mechanism base.

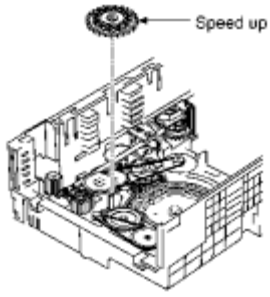


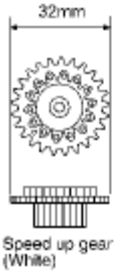
(Step 32)
Install the UD. belt and hor belt.

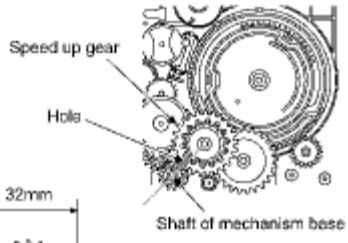
NOTE:
1. Take care not apply the grease to the belt.
2. Install the belt without twist.



(Step 33)
Install speed up gear to its shaft of mechanism base with 2 fitting.

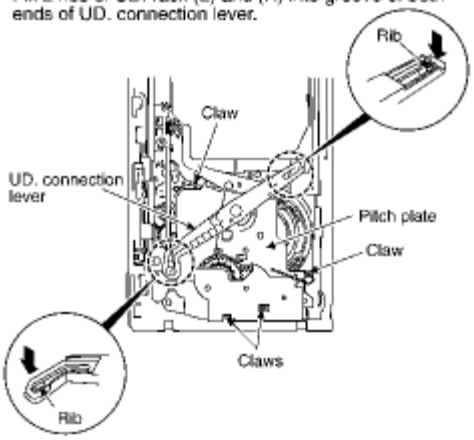




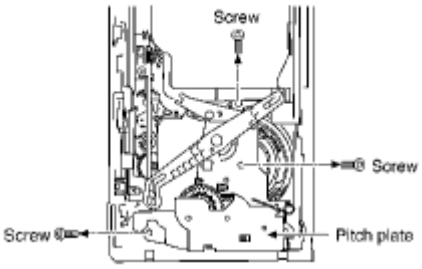


(Step 34)
Install the pitch plate. (The 4 claws should be latched.)

(Step 35)
Fix 2 ribs of UD. rack (L) and (R) into groove of both ends of UD. connection lever.

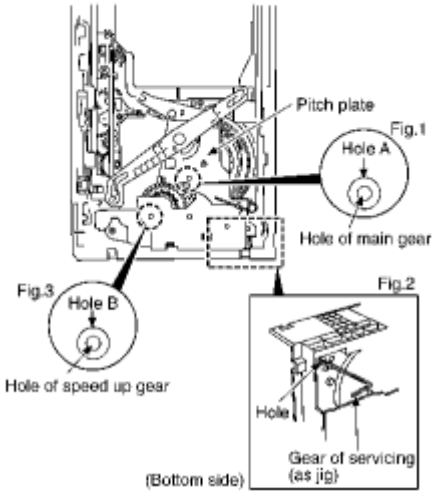


(Step 36)
Fixed it by three screws further.

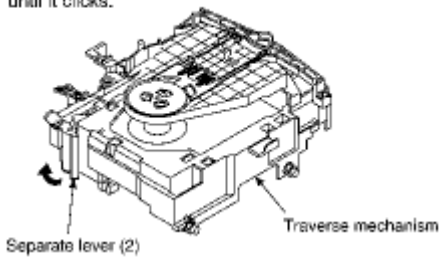


(Step 37)
Be sure the notice of below before fixing the traverse mechanism.

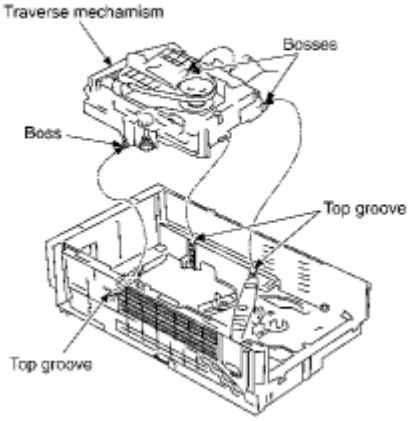
1. Check that 2 holes of both pitch plate and main gear is fitted. (Refer to Fig.1)
   If it's not fitted, put the gear for servicing in the hole of the bottom side and adjust it. (Refer to Fig.2)
2. Check that 2 holed of both pitch plate and speed up gear is futted. (Refer Fig.3)
   If it's not fitted turn the speed up gear to adjust it.



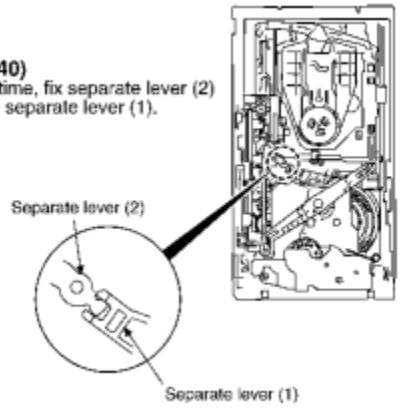
(Step 38)
Turn the separate lever (2) slowly toward left side until it clicks.



(Step 39)
Fix the left boss into the top groove of the UD. rack (L) and fix 2 bosses into the groove of the UD. rack (R).

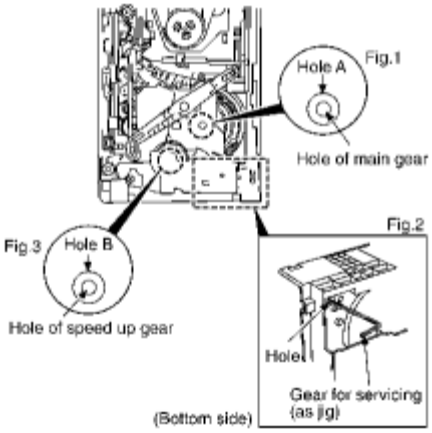


(Step 40)
At that time, fix separate lever (2) into the separate lever (1).

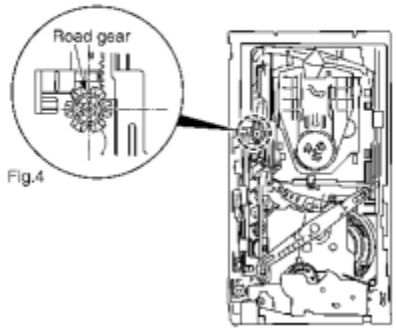


(Step 41)
After the traverse mechanism fixed, confirm the phase in order below.

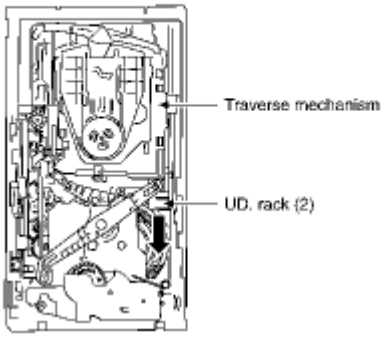
1. Check that 2 holes of both pitch plate and main gear is fitted. (Refer to Fig.1)
   If it's not fitted, put the gear for servicing in the hole of the bottom side and adjust it. (Refer to Fig.2)
2. Check that 2 holed of both pitch plate and speed up gear is futted. (Refer Fig.3)
   If it's not fitted turn the speed up gear to adjust it.



3. In the cog of road gear, the groove with it's cutting halfway set side ward. (Refer to Fig.4)
   Remove the traverse mechanism again when it is not set side ward and install it after adjustment of inserting position.
   NOTE: By this time, do not adjust to rotate the road gear.

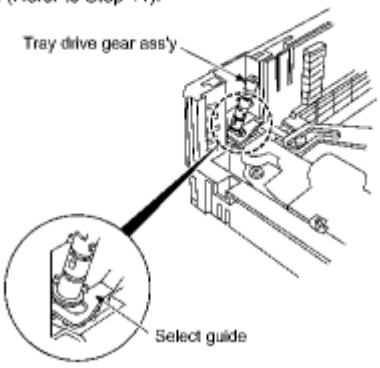


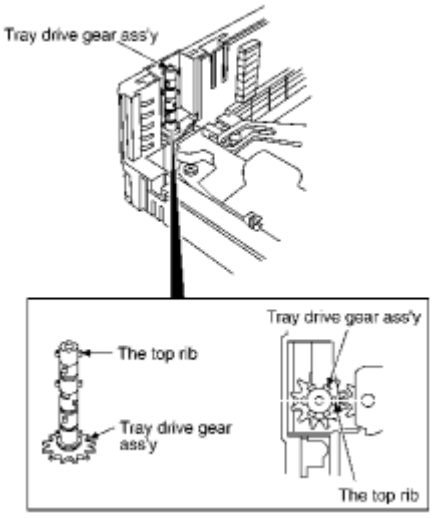
(Step 42)
After insertion of traverse mechanism, pull the UD. rack (R) on this side that each phase is "OK" and then lock the traverse mechanism.



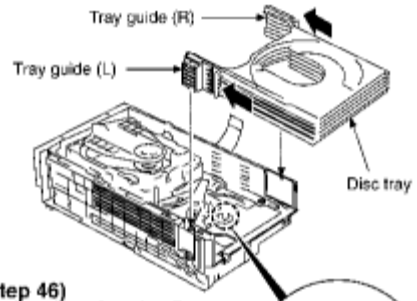
(Step 43)
Install the tray drive gear to select guide.
(Install the top rib of the tray drive gear with side ward.)

NOTE:
Confirm the each phase surely before install the tray drive gear. (Refer to Step 41).

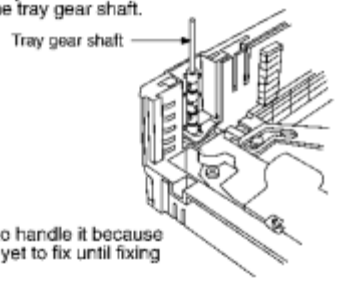




(Step 45)
Move the tray guide (R) and (L) to direction of arrow that fixed (stopped) it and install 5 pieces of disc tray.



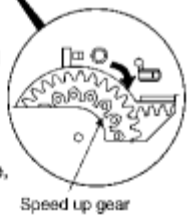
(Step 44)
Insert the tray gear shaft.



NOTE:
Be careful to handle it because the shaft is yet to fix until fixing top cover.

(Step 46)
Confirm that when the disc tray insert the upper side, the speed up gear is rotate clockwise a little.

- When the rotation of speed up gear is not clockwise or rotate, repeat from Step 45.
- Until the speed up gear rorate, repeat from Step 45 and 46.

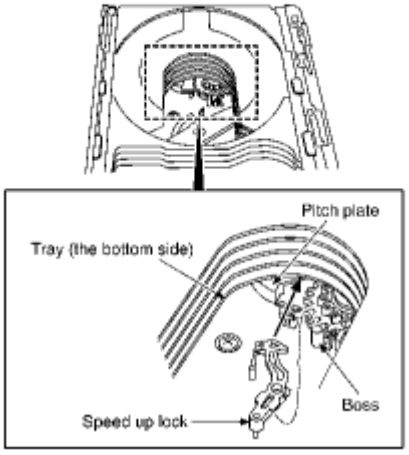


NOTE:
While keeping all postion, install 5 pieces of disc tray.

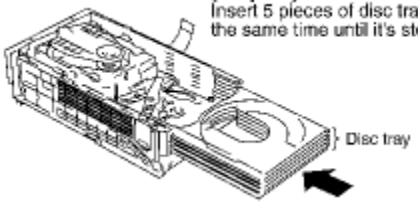
(Step 48)
Turn the traverse side 180°.

(Step 49)
While install the tip of speed up lock beween tray (No.1) of the most lower side and pitch plate for the time being.
(Do not to insert the cog of speed up gear), insert it to boss.

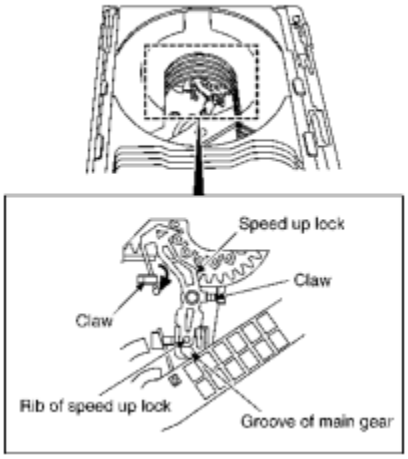
NOTE:
At that time, do not move the tray.
(See the tray the most front side)



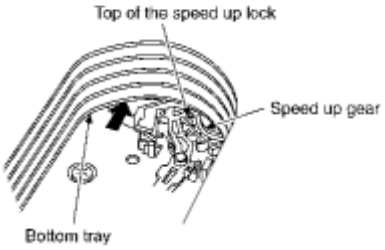
(Step 47)
Insert 5 pieces of disc tray at the same time until it's stop.



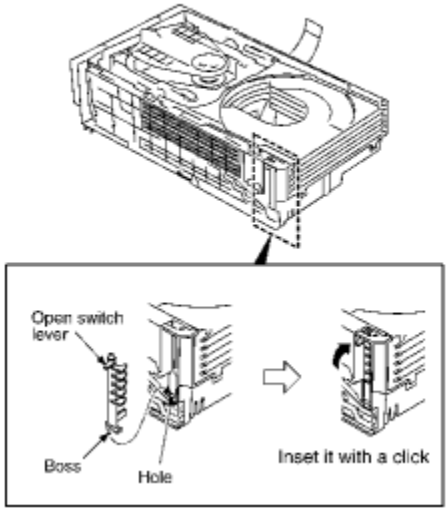
(Step 50)
Insert the rib of speed up lock into a groove of main gear, and lock it with 2 claws.



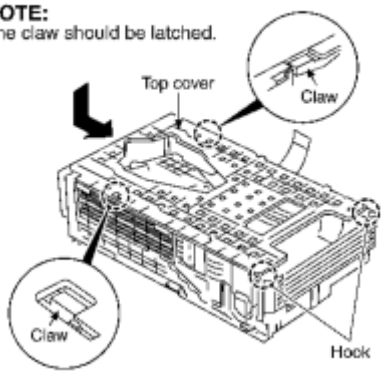
(Step 51)
Move the bottom tray to the arrow while pushing the top of the speed up gear. And insert it to a cog of the speed up gear.



(Step 52)
Install the open switch lever.
(Put the boss into the hole of the mechanism base.)



(Step 53)
Install the top cover.
Fix it into hooks and slide direction to the arrow.
NOTE:
The claw should be latched.

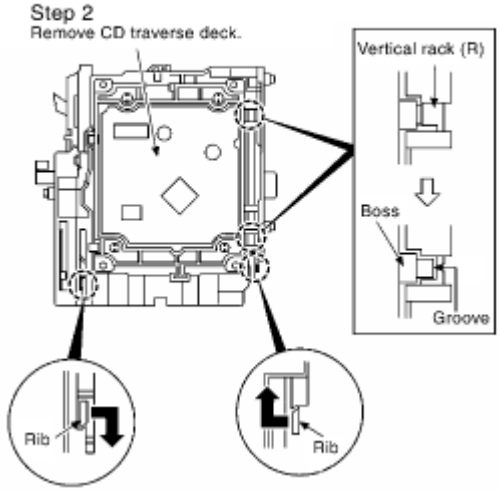


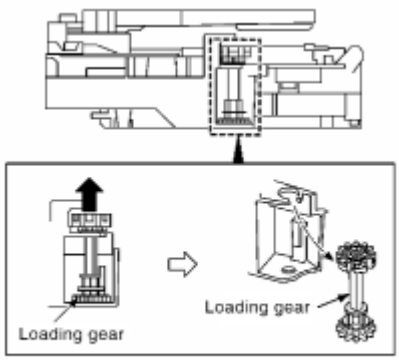
11.23 Disassembly of traverse mechanism

- Follow the (Step 1) - (Step 6) of Item 11.2.
- Follow the (Step 1) - (Step 3) of Item 11.3.
- Follow the (Step 1) - (Step 4) of Item 11.5.
- Follow the (Step 1) - (Step 2) of Item 11.7.
- Follow the (Step 1) - (Step 3) of Item 11.8.
- Follow the (Step 1) - (Step 2) of Item 11.9.
- Follow the (Step 1) - (Step 3) of Item 11.10.
- Follow the (Step 1) - (Step 2) of Item 11.11.
- Follow the (Step 1) - (Step 7) of Item 11.17.

Step 1
Shift ribs of both side to the arrow direction.
(A vertical rack (R) slides and groove opens)

Step 2
Remove CD traverse deck.

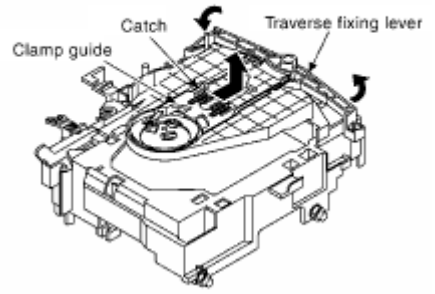




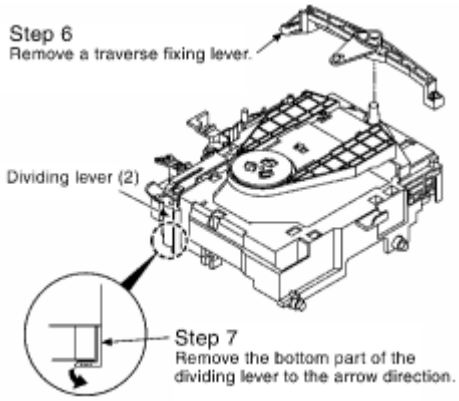
Step 3
Lift a loading gear slightly and pull out.

Step 4
Fixing lever to the arrow direction, rotate a traverse.

Step 5
Remove catch and take out a clamp guide.

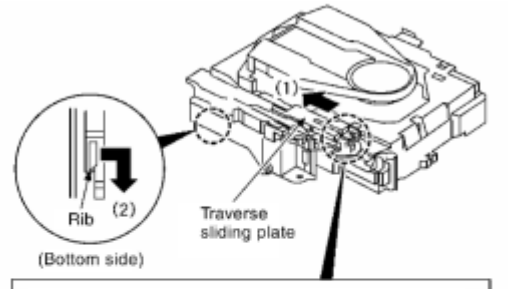


Step 6
Remove a traverse fixing lever.



Step 7
Remove the bottom part of the dividing lever to the arrow direction.

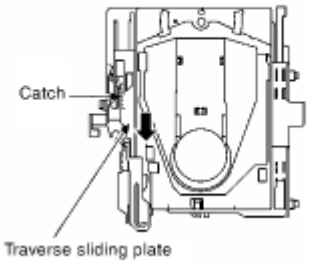
Step 8
Slide a traverse sliding plate to the arrow direction (1), and shift a rib to the arrow direction (2).



Step 9
Shifting a traverse sliding plate slightly and rotate a tray change lever.

Step 10
Remove a tray change lever.

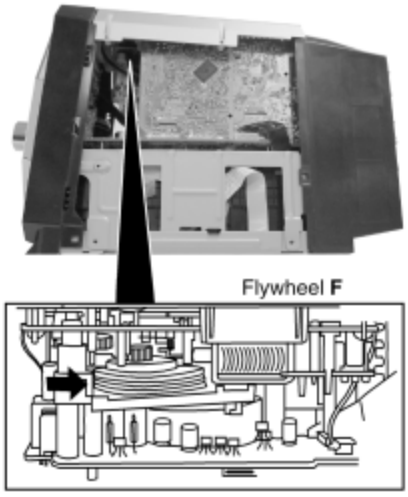
Step 11
Holding the catch down, slide a traverse sliding plate to the arrow direction and remove it.



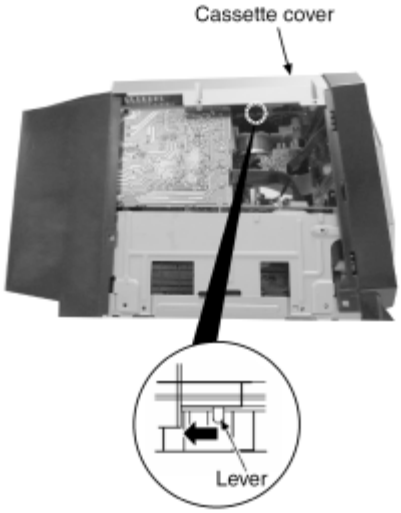
11.24 Handling of cassette tape jam

- Follow the (Step 1) - (Step 6) of Item 11.2.

Step 1
If the cassette tape is not ejected due to twining around capstan or pinch roller during playing or recording, rotate a flywheel **F** to the arrow direction to remove twined tape.



Step 2
Push the lever to the arrow direction, open the cassette cover and take out the cassette tape.



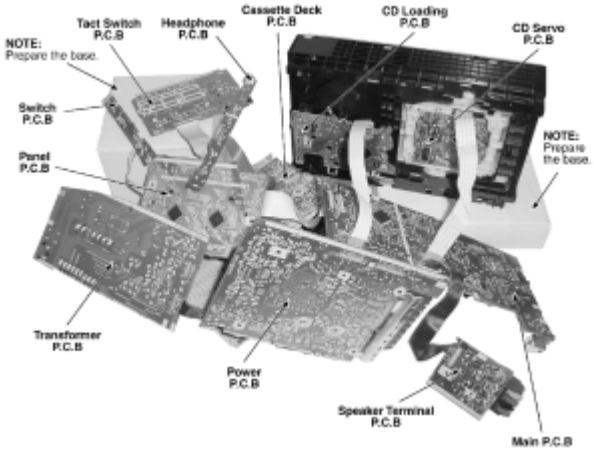
12 Service Positions

12.1 Checking procedure

Note : For the disassembling procedure, see the section 11.

12.2 Checking the major P.C.B

1. Disassembly of Side Panel L & R
2. Disassembly of Top Cabinet
3. Disassembly of Deck Mechanism P.C.B and Tape Eject P.C.B
4. Disassembly of Front Panel
5. Disassembly of Panel P.C.B Headphone P.C.B, Switch P.C.B and Tact switch P.C.B
6. Disassembly of Rear Panel
7. Disassembly of Main P.C.B
8. Disassembly of Transformer P.C.B
9. Disassembly of Speaker Terminal P.C.B
10. Disassembly of Power P.C.B
11. Disassembly of CR16 mechanism



13 Self-Diagnostic Display Function

This unit is equipped with a self-diagnostic display function, which will be useful during servicing and maintenance.

- Refer to the next page for display symbols, symptoms, etc.

13.1 Preparations

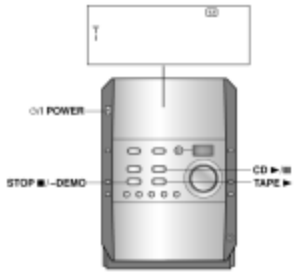
1. A Cr02-positioned blank cassette tape with an erase prevention niche on either Side A or B.
2. A normal-positioned music tape with erase prevention niches on both Sides A and B. Both tapes are halfway forwarded in advance.
3. The remote controller that comes with this unit.

13.2 Setting of the Self-Diagnostic Mode

No.	Operation Procedure	Operation and Processing of Microcomputer
1	Switch the SELECTOR to CD. There should be NO disc loaded.	
2	Press the [STOP■] key for 2 sec and press [CD PLAY] for another 2 sec, it shall enter into the diagnostic mode.	[T] shall be displayed in the FL.

13.3 Restoring Normal Display

- From the F76 display, the normal display does not appear till an error is recovered.
- For displays other than F76, press “POWER” button to turn off the power, and then turn on the power.



13.4 Clearing Self-Diagnostic Memory

(F15, F17, F22, F26, F27, F28, F29)

1. Enter a self-diagnostic mode.
2. Press "STOP■/-DEMO" button. A symbol of self-diagnostic is indicated on the display if an error is found. If several errors are found, a respective indication is displayed when "STOP■/-DEMO" button is pressingrepeatedly. (e.g. H01 → CD F15 → F01) If no error is found, only "T " indication is displayed and remains unchange even if "STOP■/-DEMO" button is pressed.

13.5 Displaying Self-Diagnostic Results

(H01, H02, H03, F01, F02)

1. Enter the self-diagnostic mode, following the instructions described in [13.2. Setting of the Self-Diagnostic Mode].
2. Insert a normal-positioned music tape with erase prevention niches on both Sides A and B. Press [TAPE ►] button to

activate the TPS operation so that the tape automatically stopsat an interval between music selections.

3. Press [STOP■ /-DEMO] and [TAPE ▶] buttons together on the remote controller. (Recording does not start.)
4. Then, insert a Cr02-positioned blank cassette tape with an erase prevention niche of Side A or B set to the left side.
5. Press [^ /FF/ ⏭] button on the remote control. The tape will be forwarded and automatically stopafter two seconds.
6. Remove the cassette tape, and set the other side.
7. Press [v /REW/ ⏮] button on the remote control. The tape will be rewound and automatically stopsafter two seconds.
8. Press [STOP■/-DEMO] button on the unit.

   If an error is found, a self-diagnostic key appears on the display.

   If several errors are found, the display shows these keys when [STOP■/-DEMO] button is pressed repeatedly. (Ex.: H01 - H02 - F01 - H01)

   If no error is found, only the message, “CD TEST” appears on the display.

(*1) TPS operation (music search) detects the blank sections between music selections. Therefore, do not use tapes with the following conditions:

- A blank section that lasts only 4 seconds or less.
- No blank sections (recording through microphones, etc.).
- Music selections that have extremely low pitches or prolonged silent sections (such as classical music).
- and/or Music recorded with fade in/out effect.

13.5.1 Error detection for CD Block

Error Code	Abnormal Items	Possible Cause
F15	CD REST SW abnormal	CD traverse position intial setting operation failsafe counter (1000 ms) waiting for REST SW to turn on. Error No. shall be clear by force or during coldstart.
H15	The CD tray closes	CD disc tray detect switch NG. (Check and replace)
F26	CD servo LSI command signal abnormal	CD function DTMS command, after system setting, If SENSE = ‘L’ cannot be detected. Memory shall contain F26 code. After Power on, CD function shall continue, error shall occur “NODISC”. Error No. shall be clear by force or coldstart.
F28	DISC LOAD abnormal	While going to play position, if failsafe counter is finished and switch o change or switch target condition was not achieve, this error shall be memorized. Next time mechanism operates, it shall do coldstart. ErrorNo. shall be clear by force or coldstart.
F29	DISC unload abnormal	While going to play position, if failsafe counter is finished and switch no change or switch target condition was not achieve, this error shall be memorized. Next time mechanism operates, it shall do coldstart. ErrorNo. shall be clear by force or coldstart.
F27	Slide operation abnormal	During vertical operation, if failsafe timer is finished and switch no change or switch target condition was not achieve, this error shall be memorized. Next time mechanism operates, it shall do coldstart.ErrorNo. shall be clear by force or coldstart.
F17	Down SW abnormal	During vertical operation going to the bottom position, if failsafe timer is finished and switch no change or switch target condition was not achieve, this error shall be memorized. The Next time mechanism operates,it shall do mechanism initialization.Error No. shall be clear by force or coldstart.
F22	Loading Mode / Mecha abnormal	During mecha initialization, Loading mode mechanism abnormal, normal operation cannot be achieve. The next time mechanism operates, it shall do mechanism initialization.Error No. shall be clear by force or coldstart.
Abnormal item	Error Display	Method of detection
F75	CD power abnormal	Under normal operation (self-diagnostic mode inclusive), check if CDRST is H for SELECTOR at CD. If it is not H after 1 sec, it shall be memorised as an error.

13.5.2 Error detection code for Cassette Mechanism Block

Error Code	Abnormal Items	Possible Cause
	MODE SW	Normal operation during mecha transition, MODE SW abnormal is memorised. The content of

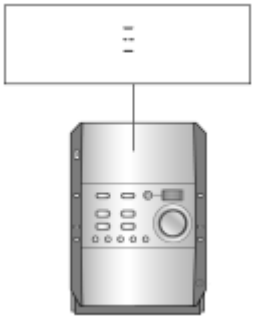
H01	abnormal	abnormality can be confirmed in the abnormal detection mode explained in the later section.
H02	REC INH SW abnormal	The content of abnormality can be confirmed in the abnormal detection mode explained in the later section.
H03	HALF SW abnormal	
F01	Reel pulse abnormal	
F02	TPS abnormal	

13.5.3 Doctor Mode set up

a) At any more (CD, TAPE, TUNER).

b) To enter Doctor Mode, press Doctor Mode key [C2DF] of special remote control or input 4 then 7 from the remote control while pressing STOP ■ key of the main set.

13.5.4 Cold start setting



1. Doctor mode ON.
2. Remote control SLEEP key ON.

- Data shall be set in order to make a cold start (backup data are initialized) when reset starts next time.
  To clarify that the code was accepted at this time, The pattern below is displayed in the LCD for 2 seconds.

(Note) In the case that you unplug from AC outlet after this mode was set, then plug to AC again, a cold start shall begin.

And “- - - - - - - - -” is displayed in the FL for 2 seconds.

14 Procedure for Checking Operation of Individual Parts for Cassette Mechanism Unit

14.1 Operation Check with Cassette Tape

1. Pull up the EJECT lever using a rubber band. (Cf. Fig. 6)
2. Supply DC5V to MOTOR. (→ MOTOR rotates.) (Cf. Fig. 5)
3. Insert a cassette tape to the unit.
4. Supply DC9V to the plunger, and turn the power ON and OFF. (→ Power +PL, -PL) (Cf. Fig. 5)
    1. FWD PLAY: Supply the plunger power in a flash. (ON: approx. 5msec)
    2. FWD FF: Supply the plunger power in a flash at PLAY mode. (ON: approx. 5msec)
    3. STOP: Supply the plunger power in a flash at FWD FF mode. (ON: approx. 5msec)
    4. REV PLAY: Supply the plunger power in a normal timing at STOP mode. (ON: approx. 200msec)
    5. REV REW: Supply the plunger power in a flash at REV PLAY mode. (ON: approx. 50msec)
    6. STOP: Supply the plunger power in a flash at FF mode. (ON: approx. 50msec)
    Repeat the operation (→ FWD PLAY)
    (Note) Other operation may start if a timing of supplying the plunger power is missed.

14.1.1 Connection Status between Mechanism and Power Supply (Motor, Plunger)

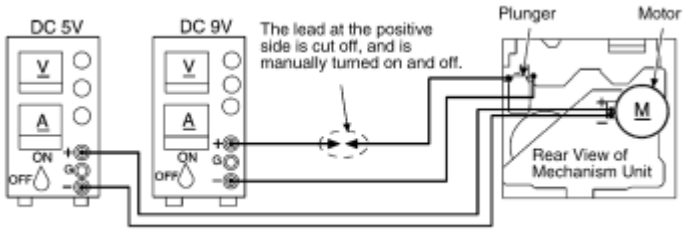


Fig. 5

14.1.2 Operative Parts of Mechanism Unit (EJECT lever fitted with rubber band, Plunger / Rib operation)

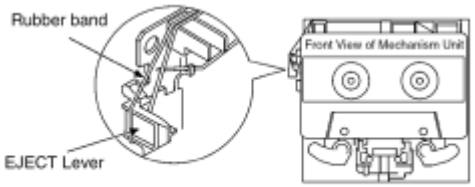


Fig. 6

14.2 Operation Check without Cassette Tape

1. Pull up the EJECT lever using a rubber band. (Cf. Fig. 6)
2. Supply DC5V to MOTOR. (→ MOTOR rotates.)

3. Lift up the mechanism unit’s plunger/rib with the tip of a negative screwdriver, and operate the unit in the same timing as

   supplying the power. (Cf. Fig. 7)

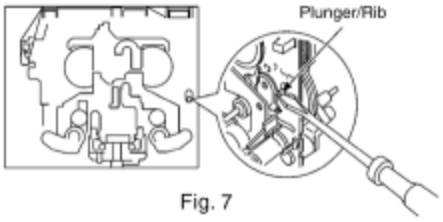


Fig. 7

15 Measurement And Adjustments

15.1 Cassette Deck Section

15.1.1 Requirements

- Test tape (QZZCFM) (QZZCWAT)
- Normal blank cassette tape (QZZCRA)
- Digital frequency counter
- Oscilloscope
- Electrical voltmeter
- Headphone jack output jig (Cf. Fig. 8)

15.1.2 Setting of Unit

- VOLUME: MAX

15.1.3 Preparations

1. Apply under [11. Assembling and Disassembling].
2. Remove 4 screws from the mechanism unit to disassemble. under [11. Assembling and Disassembling].
3. Connect the headphone jack output jig (Cf. Fig. 8) to headphone jack.

Fig. 8

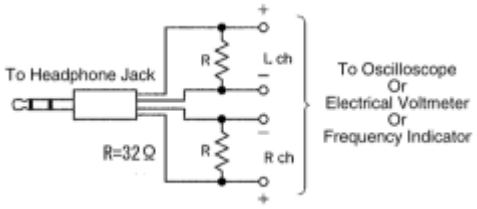
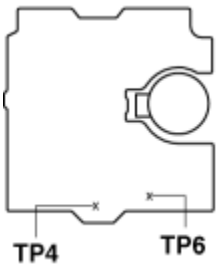


Fig. 9



15.1.4 Tape Speed Adjustment

- Normal speed adjustment (only during forward playback)
  (Product reference value: 3,000±90Hz)

1. Connect a frequency indicator. (Cf. Fig. 12)
2. Playback the middle portion of the test tape (QZZCWAT).
3. Adjust the motor screw so that the following output level is produced. (Cf. Fig. 10)
   Adjustment Range: 3,000 ± 90Hz (a constant speed)

Fig. 10

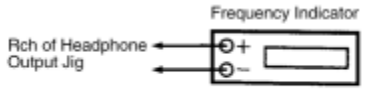
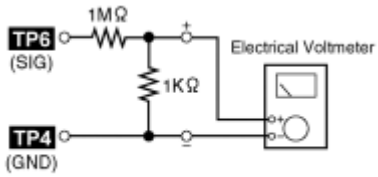


Fig. 11

15.1.5 Bias Voltage Check

1. Connect an electrical voltmeter. (Cf. Fig. 9) (Cf. Fig. 12)
2. Set the function to “TAPE” position.
3. Insert a normal blank cassette tape (QZZCRA).
4. While pressing and holding down [REC (● / ❚❚)] button, press [TAPE (▶)] button to pause the recording mode. (Repeat pressing the buttons till the recording pause mode is activated.)
5. Check that the output level is within the standard range.
   Standard Range: 14 ± 4mV

Fig. 12

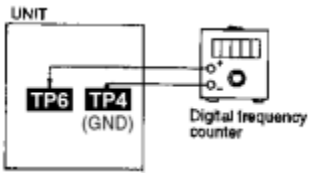


15.1.6 Bias Frequency Check

1. Connect a digital frequency counter (Figure 13).
2. Set the function to “TAPE” position.
3. Insert a normal blank cassette tape (QZZCRA) and press “REC” mode on main unit.
4. Check that the output frequency is within the standard range.

   Standard Value: 98 ±8 kHz

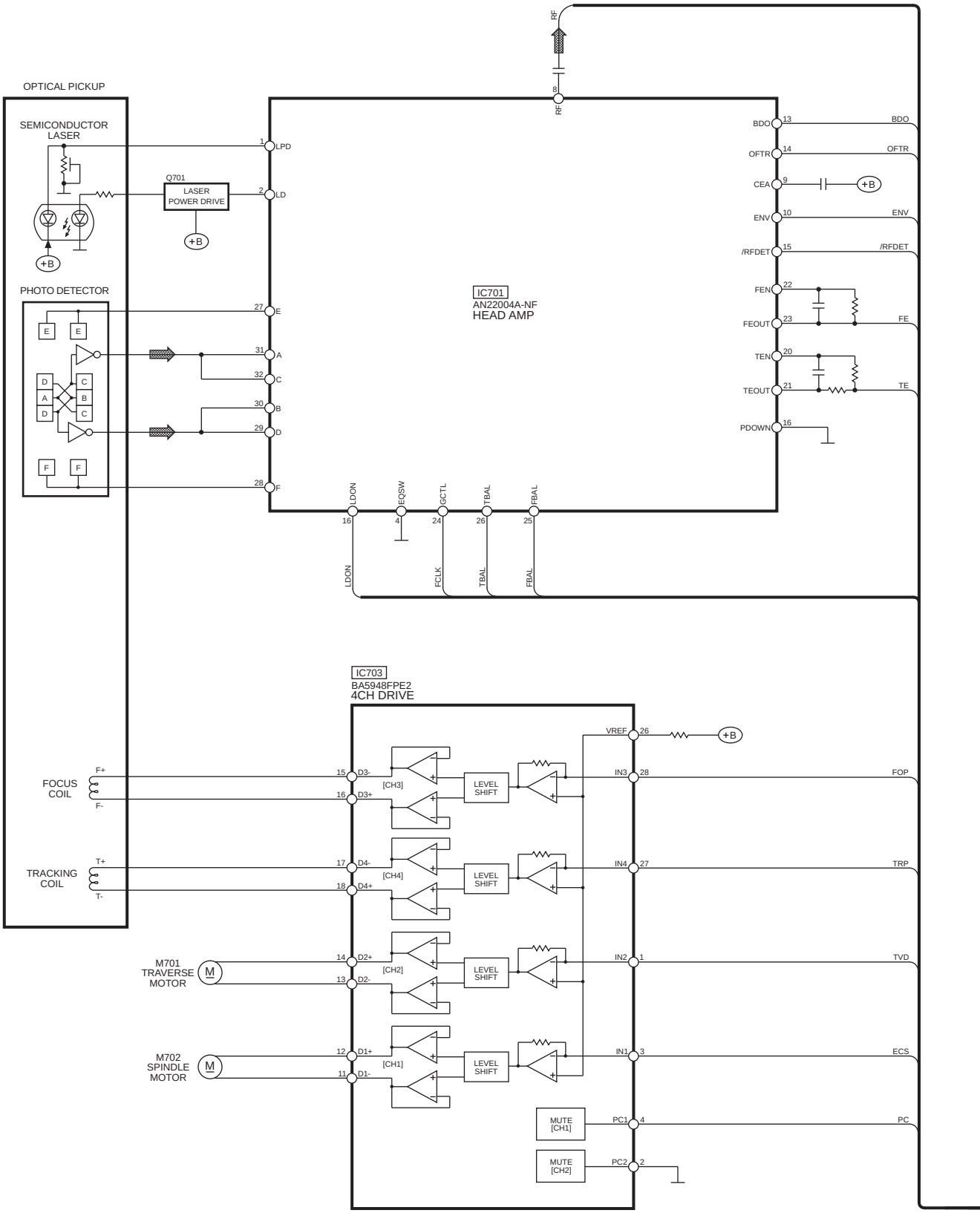
Fig. 13

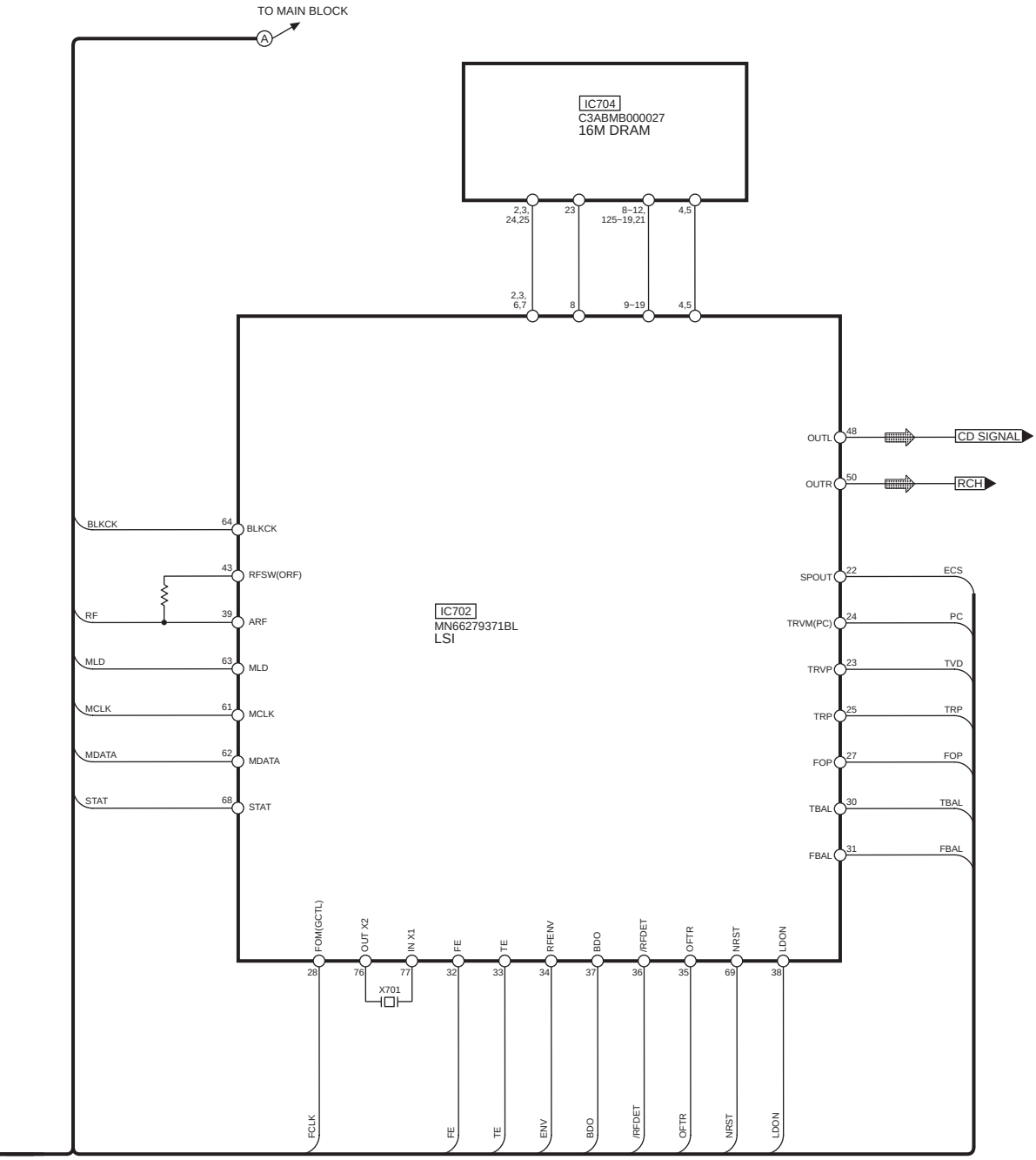


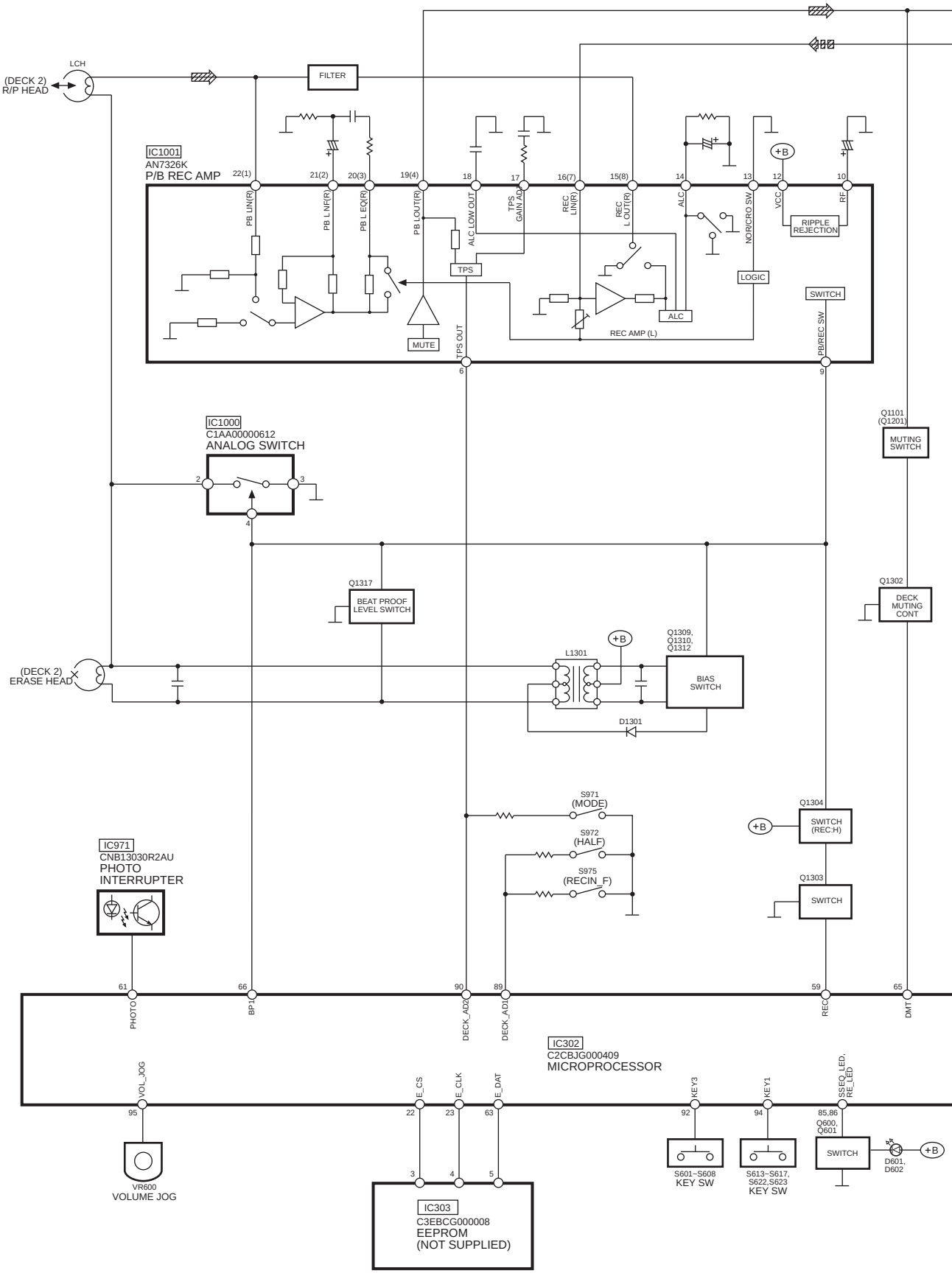
16 Block Diagram

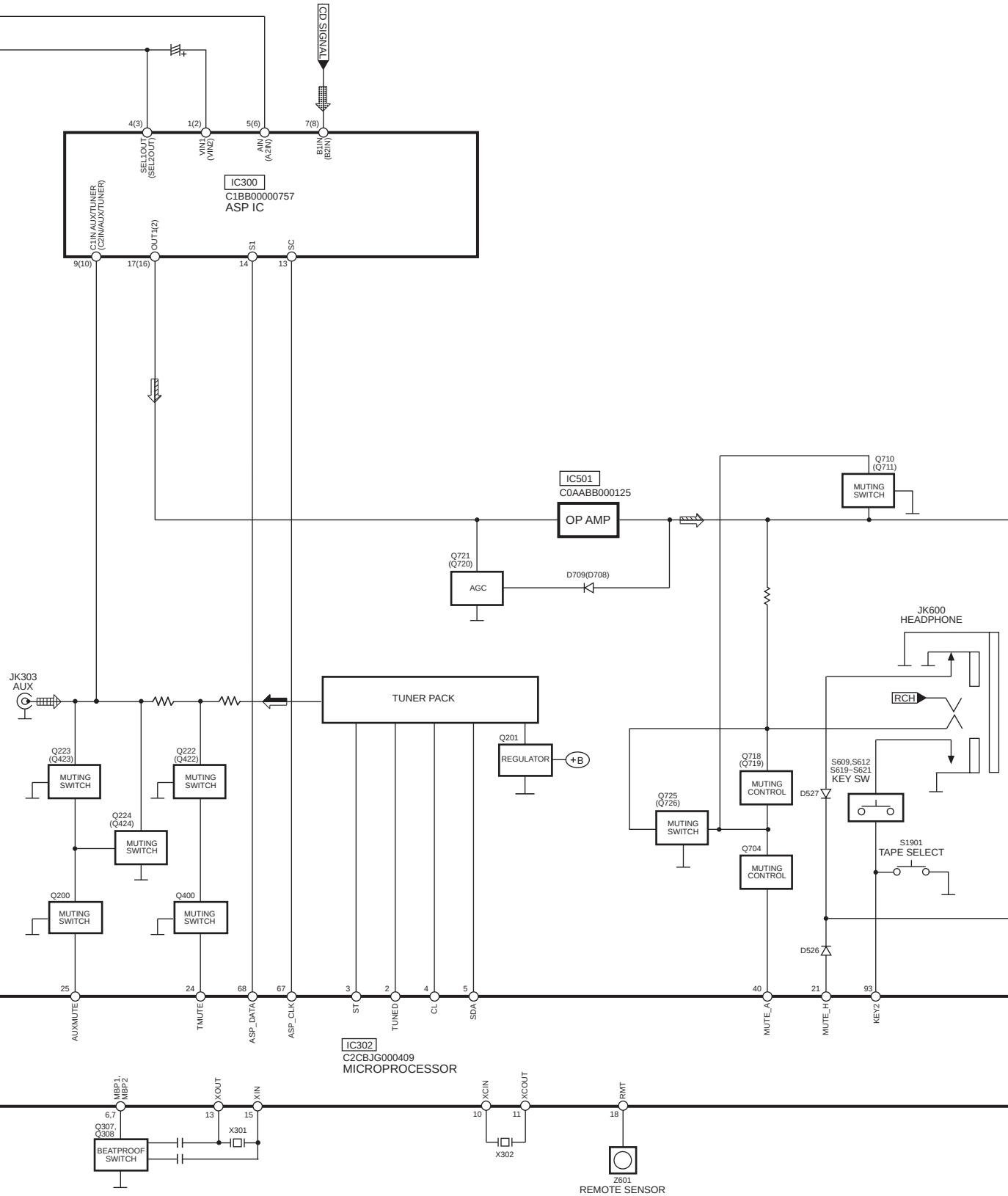
16.1 CD Servo Block

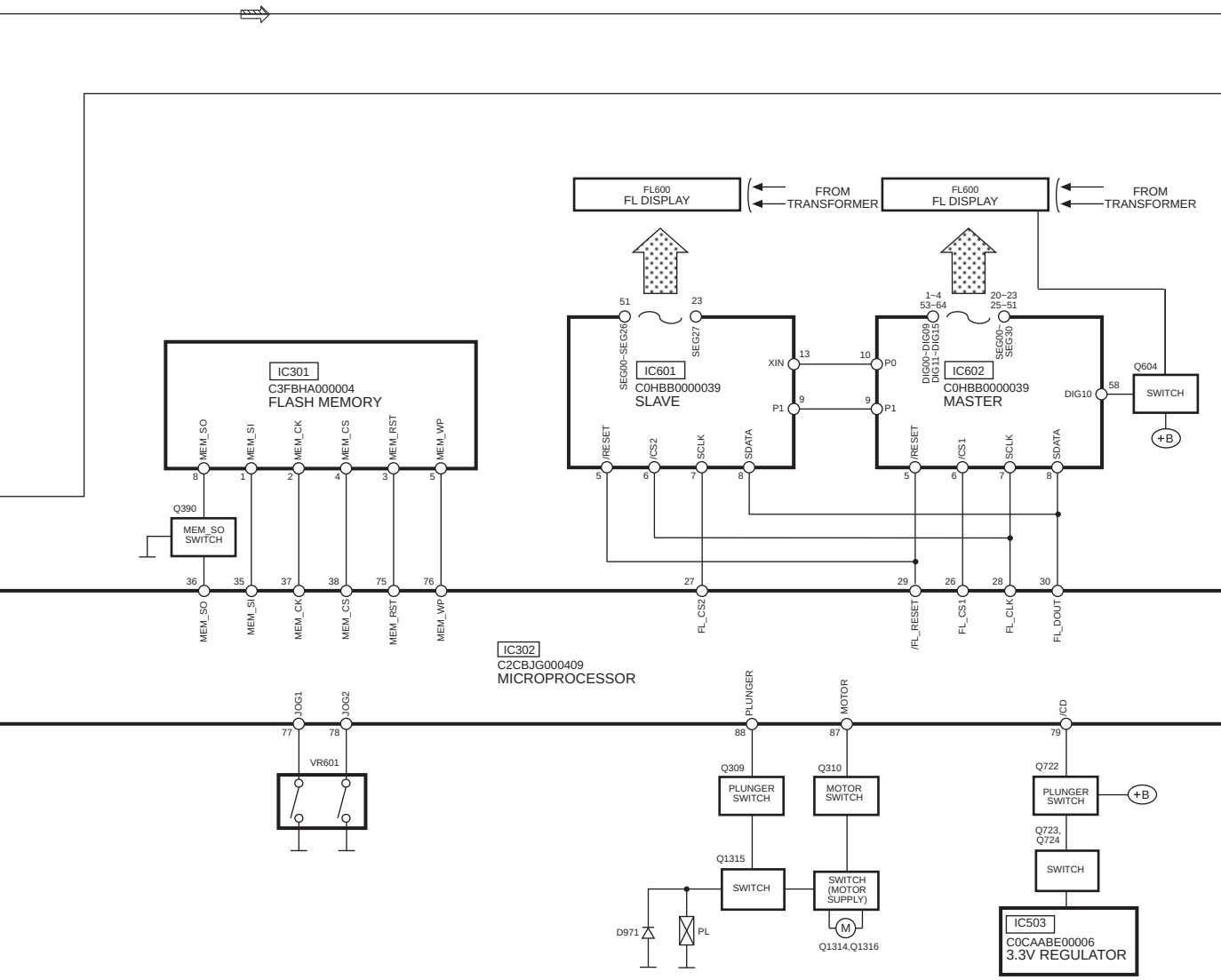
16.2 Main Block

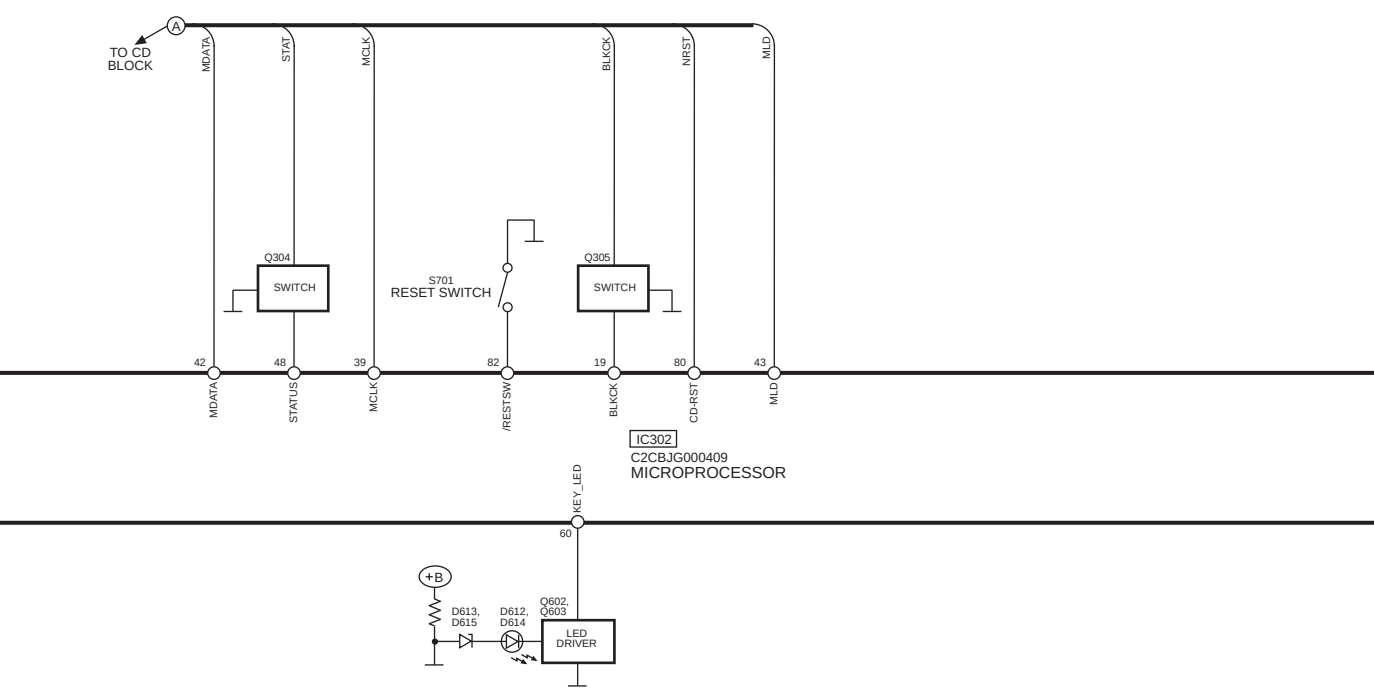

OPTICAL PICKUP
SEMICONDUCTOR LASER
PHOTO DETECTOR
Q701
LASER POWER DRIVE
+B
IC701
AN22004A-NF
HEAD AMP
RF
LPD
LD
E
A
C
B
D
F
BDO
OFTR
CEA
ENV
/RFDET
FEN
FEOUT
FE
TEN
TEOUT
TE
PDOWN
LDON
EQSW
GCTL
TBAL
FBAL
FCLK
IC703
BA5948FPE2
4CH DRIVE
VREF
FOCUS COIL
F+
F-
TRACKING COIL
T+
T-
M701
TRAVERSE MOTOR
M702
SPINDLE MOTOR
D3-
D3+
[CH3]
D4-
D4+
[CH4]
D2+
D2-
[CH2]
D1+
D1-
[CH1]
LEVEL SHIFT
IN3
IN4
IN2
IN1
FOP
TRP
TVD
ECS
MUTE [CH1]
MUTE [CH2]
PC1
PC2
PC

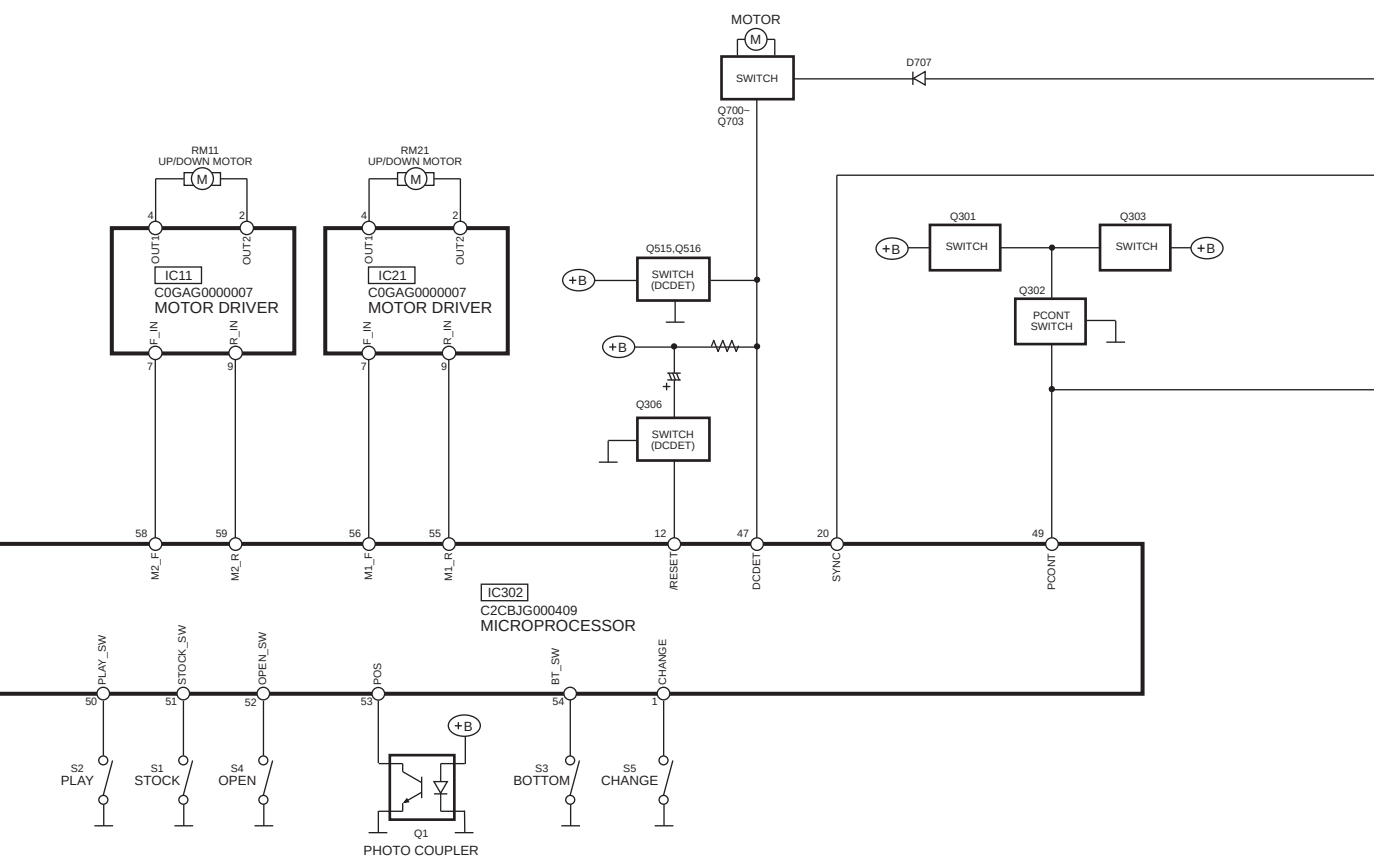

TO MAIN BLOCK
A
IC704
C3ABMB000027
16M DRAM
2,3,
24,25
23
8–12,
125–19,21
4,5
2,3,
6,7
8
9–19
4,5
IC702
MN66279371BL
LSI
OUTL
48
CD SIGNAL
OUTR
50
RCH
SPOUT
22
ECS
TRVM(PC)
24
PC
TRVP
23
TVD
TRP
25
TRP
FOP
27
FOP
TBAL
30
TBAL
FBAL
31
FBAL
BLKCK
64
BLKCK
43
RFSW(ORF)
RF
39
ARF
MLD
63
MLD
MCLK
61
MCLK
MDATA
62
MDATA
STAT
68
STAT
FOM(GCTL)
OUT X2
IN X1
FE
TE
RFENV
BDO
/RFDET
OFTR
NRST
LDON
28
76
77
32
33
34
37
36
35
69
38
X701
FCLK
FE
TE
ENV
BDO
/RFDET
OFTR
NRST
LDON


LCH
(DECK 2)
R/P HEAD
FILTER
IC1001
AN7326K
P/B REC AMP
22(1)
21(2)
20(3)
19(4)
18
17
16(7)
15(8)
14
13
12
10
PB LIN(R)
PB LNF(R)
PB L EQ(R)
PB LOUT(R)
ALC LOW OUT
TPS GAIN ADJ
REC LIN(R)
REC L OUT(R)
ALC
NOR/CRO SW
VCC
RF
+B
RIPPLE REJECTION
TPS
LOGIC
SWITCH
ALC
MUTE
REC AMP (L)
TPS OUT
PB/REC SW
6
9
IC1000
C1AA00000612
ANALOG SWITCH
2
3
4
Q1101
(Q1201)
MUTING SWITCH
Q1317
BEAT PROOF LEVEL SWITCH
Q1302
DECK MUTING CONT
(DECK 2)
ERASE HEAD
L1301
+B
Q1309,
Q1310,
Q1312
BIAS SWITCH
D1301
S971
(MODE)
S972
(HALF)
S975
(RECIN_F)
Q1304
+B
SWITCH
(REC:H)
Q1303
SWITCH
IC971
CNB13030R2AU
PHOTO
INTERRUPTER
61
66
90
89
59
65
PHOTO
BP
DECK_ADJ
DECK_ADJ
REC
DMT
IC302
C2CBJG000409
MICROPROCESSOR
VOL_JOG
E_CS
E_CLK
E_DAT
KEY3
KEY1
SSEQ_LED,
RE_LED
95
22
23
63
92
94
85,86
Q600,
Q601
SWITCH
+B
D601,
D602
VR600
VOLUME JOG
3
4
5
S601~S608
KEY SW
S613~S617,
S622,S623
KEY SW
IC303
C3EBCG000008
EEPROM
(NOT SUPPLIED)


CD SIGNAL
4(3)
1(2)
5(6)
7(8)
SEL1OUT (SEL2OUT)
VIN1 (VIN2)
AIN (A2IN)
BIIN (B2IN)
IC300
C1BB00000757
ASP IC
C1IN (AUX/TUNER (C2IN/AUX/TUNER)
OUT1(2)
S1
SC
9(10)
17(16)
14
13
IC501
C0AABB000125
OP AMP
Q710 (Q711)
MUTING SWITCH
Q721 (Q720)
AGC
D709(D708)
JK600 HEADPHONE
JK303 AUX
TUNER PACK
RCH
Q201
REGULATOR
+B
Q223 (Q423)
Q222 (Q422)
Q224 (Q424)
Q200
Q400
MUTING SWITCH
Q718 (Q719)
MUTING CONTROL
S609,S612 S619~S621 KEY SW
D527
Q725 (Q726)
Q704
S1901 TAPE SELECT
D526
25
24
68
67
3
2
4
5
40
21
93
AUXMUTE
TMUTE
ASP_DATA
ASP_CLK
ST
TUNED
CL
SDA
MUTE_A
MUTE_H
KEY2
IC302
C2CBJG000409
MICROPROCESSOR
MBP1, MBP2
XOUT
XIN
XCIN
XCOUT
RMT
6,7
13
15
10
11
18
Q307, Q308
BEATPROOF SWITCH
X301
X302
Z601
REMOTE SENSOR


FL600
FL DISPLAY
FROM
TRANSFORMER
FL600
FL DISPLAY
FROM
TRANSFORMER
IC301
C3FBHA000004
FLASH MEMORY
MEM_SO
MEM_SI
MEM_CK
MEM_CS
MEM_RST
MEM_WP
Q390
MEM_SO
SWITCH
IC601
C0HBB0000039
SLAVE
SEG00-SEG26
SEG27
XIN
P0
P1
/RESET
/CS2
SCLK
SDATA
IC602
C0HBB0000039
MASTER
DIG00-DIG09
DIG11-DIG15
SEG00-
SEG30
/RESET
/CS1
SCLK
SDATA
DIG10
Q604
SWITCH
+B
IC302
C2CBJG000409
MICROPROCESSOR
MEM_SO
MEM_SI
MEM_CK
MEM_CS
MEM_RST
MEM_WP
FL_CS2
/FL_RESET
FL_CS1
FL_CLK
FL_DOUT
OG1
OG2
VR601
PLUNGER
MOTOR
/CD
Q309
PLUNGER
SWITCH
Q310
MOTOR
SWITCH
Q1315
SWITCH
SWITCH
(MOTOR
SUPPLY)
D971
PL
M
Q1314,Q1316
Q722
PLUNGER
SWITCH
+B
Q723,
Q724
SWITCH
IC503
C0CAABE00006
3.3V REGULATOR


A
TO CD BLOCK
MDATA
STAT
MCLK
BLKCK
NRST
MLD
Q304
SWITCH
S701
RESET SWITCH
Q305
SWITCH
42
48
39
82
19
80
43
MDATA
STATUS
MCLK
/RESTSW
BLKCK
CD-RST
MLD
IC302
C2CBJG000409
MICROPROCESSOR
KEY_LED
60
+B
D613, D615
D612, D614
Q602, Q603
LED DRIVER

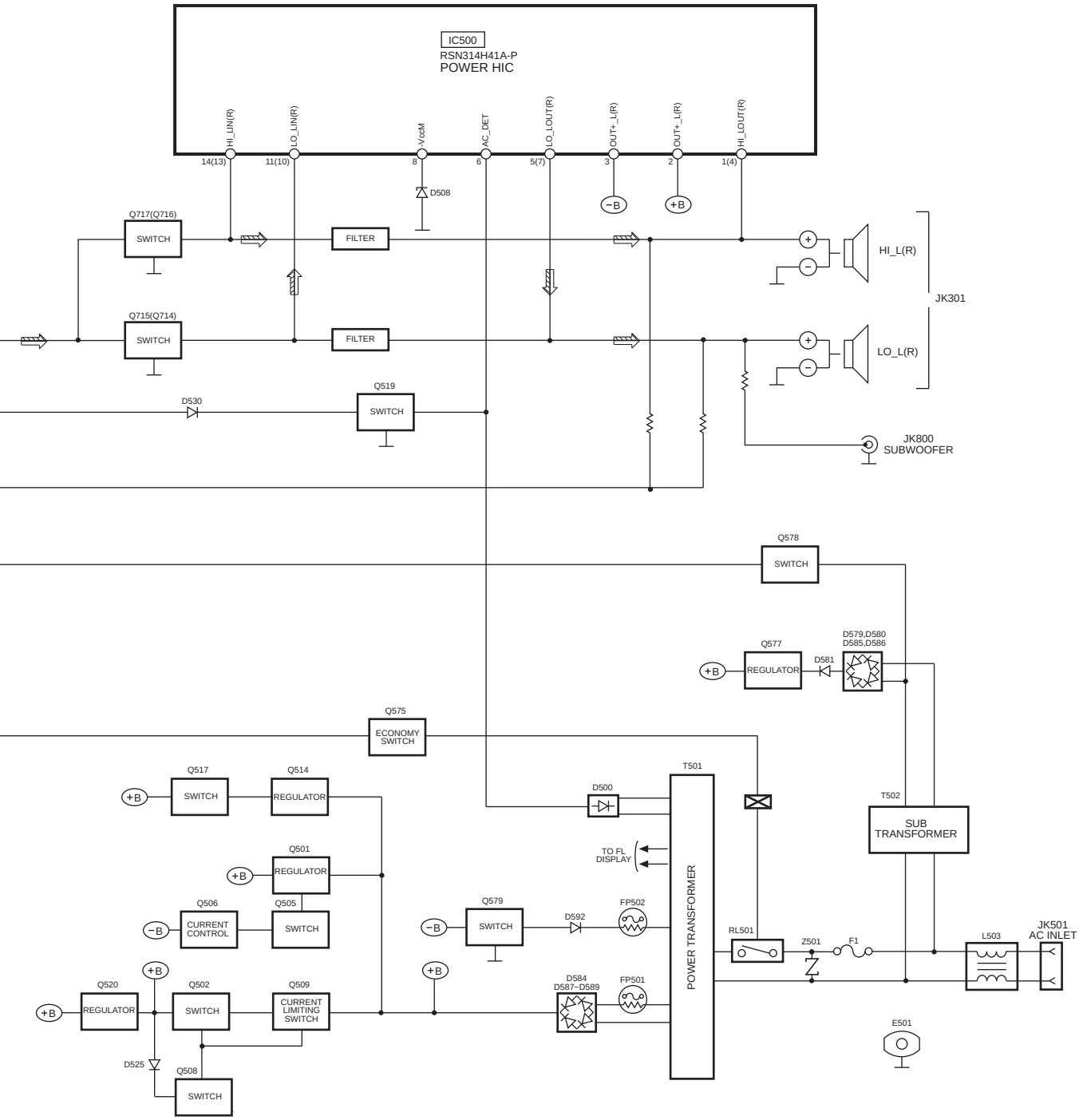

MOTOR
SWITCH
D707
Q700–
Q703
RM11
UP/DOWN MOTOR
RM21
UP/DOWN MOTOR
IC11
C0GAG0000007
MOTOR DRIVER
IC21
C0GAG0000007
MOTOR DRIVER
OUT1
OUT2
F_IN
R_IN
Q515,Q516
SWITCH
(DCDET)
Q306
SWITCH
(DCDET)
+B
Q301
SWITCH
Q303
SWITCH
Q302
PCONT
SWITCH
M2_F
M2_R
M1_F
M1_R
/RESET
DCDET
SYNC
PCONT
IC302
C2CBJG000409
MICROPROCESSOR
PLAY_SW
STOCK_SW
OPEN_SW
POS
BT_SW
CHANGE
S2
PLAY
S1
STOCK
S4
OPEN
S3
BOTTOM
S5
CHANGE
Q1
PHOTO COUPLER

SIGNAL LINES

: MAIN SIGNAL LINE
: FM/AM SIGNAL LINE
: TAPE PLAYBACK SIGNAL LINE
: TAPE RECORD SIGNAL LINE
CD SIGNAL LINE
: AUX SIGNAL LINE

( ) Indicates Pin No. of Right Channel

Note : Signal Lines are applicable to the Left Channel only.



17 Notes of Schematic Diagram

(All schematic diagrams may be modified at any time with the development of new technology)

Note :

S1
Stock switch
S2
Play switch
S3
Bottom switch
S4
Open switch
S5
Change switch
S601
CD 1 switch
S602
CD 2 switch
S603
CD 3 switch
S604
CD 4 switch
S605
CD 5 switch
S606
CD switch
S607
Tape switch
S608
Tuner/Band switch
S609
Enter switch
S612
Play List switch
S613
Stop/Demo switch
S614
Power switch
S615
Rec switch
S616
Aux switch
S617
CD Check switch
S619
Return switch
S620
CD Change switch
S621
Open/Close switch
S622
Re-Master switch

S623
SSEQ switch
S701
Reset switch
S971
Mode switch
S972
Half switch
S973
CR02 switch
S975
Recinh_F switch
S1901
Tape Eject switch
VR600
Volume VR

- The voltage value and waveforms are the reference voltage of this unit measured by DC electronic voltmeter (high impedance) and oscilloscope on the basis of chassis. Accordingly, there may arise some error in voltage values and waveformsdepending upon the internal impedance of the tester or the measuring unit.

No mark
: Playback
<< >>
: Rec
(( ))
: CD
< >
: FM
( )
: AM

- **Importance safety notice :**

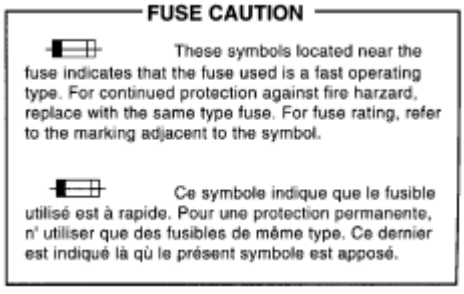
  Components identified by ⚠ mark have special characteristics important for safety. Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. Whenreplacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

Caution !

IC, LSI and VLSI are sensitive to static electricity.
Secondary trouble can be prevented by taking care during repair.

- Cover the parts boxes made of plastics with aluminium foil.
- Put a conductive mat on the work table.
- Ground the soldering iron.
- Do not touch the pins of IC, LSI or VLSI with fingers directly.

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE F1 1.6A, 125V FUSE.
RISK OF FIRE-REPLACE FUSE AS MARKED.

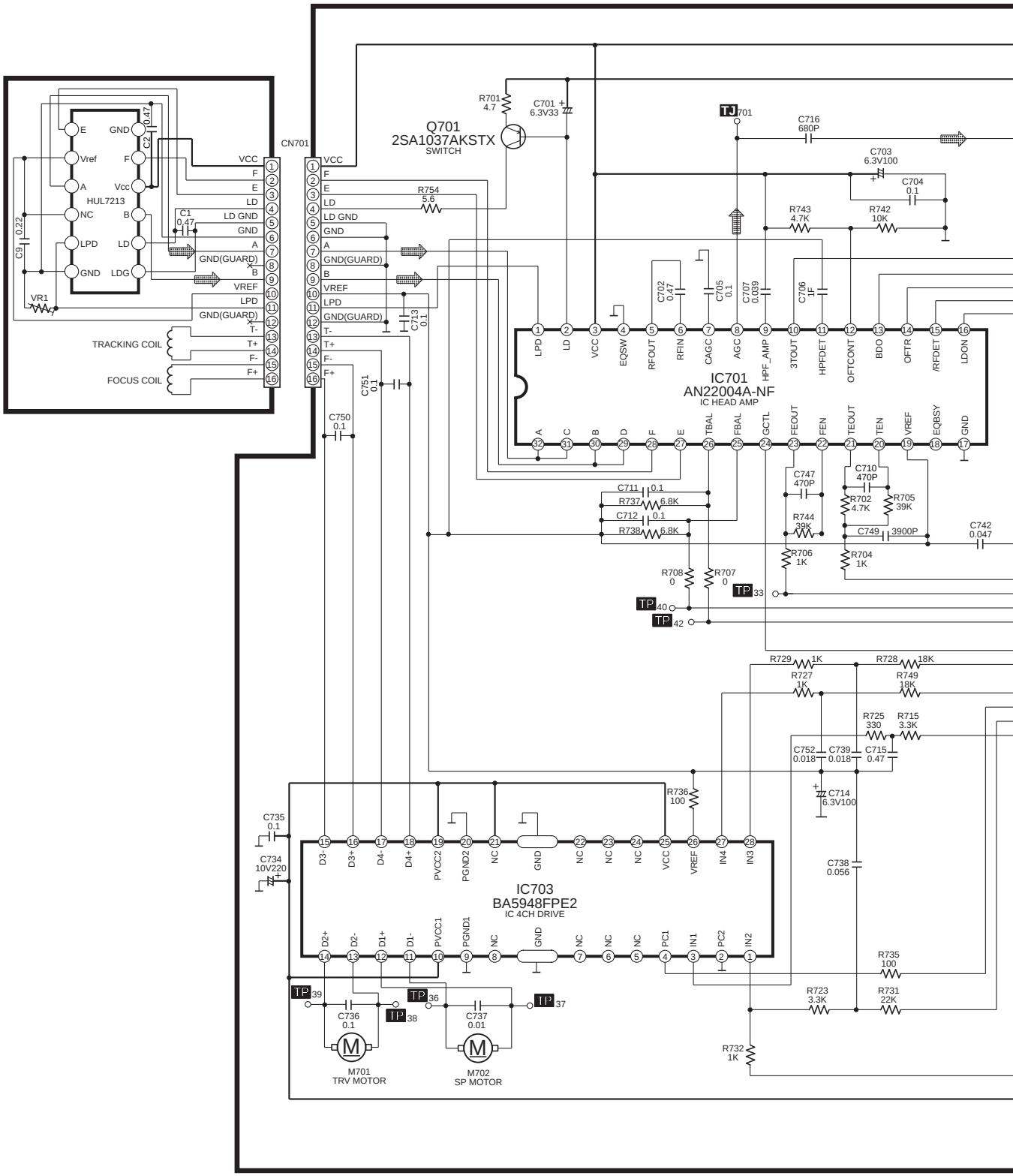

FUSE CAUTION
These symbols located near the fuse indicates that the fuse used is a fast operating type. For continued protection against fire harzard, replace with the same type fuse. For fuse rating, refer to the marking adjacent to the symbol.
Ce symbole indique que le fusible utilisé est à rapide. Pour une protection permanente, n' utiliser que des fusibles de même type. Ce dernier est indiqué là qù le présent symbole est apposé.

- 0 COVER
- 1 Safety Precautions
- 2 Before Repair and Adjustment
- 3 Protection Circuitry
- 4 Handling the Lead-free Solder
- 5 Precaution of Laser Diode
- 6 Handling Precautions For Traverse Deck
- 7 Accessories
- 8 Operation Procedures
- 9 Information on MP3 & WMA
- 10 About HighMAT
  - 10_1 What is HighMAT?
  - 10_2 Why use HighMAT?
  - 10_3 The advantages of using HighMAT
  - 10_4 Outline of the HighMAT standard
- 11 Assembling and Disassembling
- 12 Service Positions
- 13 Self-Diagnostic Display Function
- 14 Procedure for Checking Operation of Individual Parts for Cassette Mechanism Unit
- 15 Measurement And Adjustments
- 16 Block Diagram
- 17 Notes of Schematic Diagram
- 18 Schematic Diagram
- 19 Printed Circuit Board
- 20 Wiring Connection Diagram
- 21 Illustration of IC ' s, Transistors and Diodes
- 22 Terminal Function of IC ' s
- 23 Troubleshooting Flowchart (CD Section Circuit)
- 24 Parts Location and Replacement Parts List
- 25 Additional Contents 1
- 26 Additional Contents 2

SCHEMATIC DIAGRAM-1

A CD SERVO CIRCUIT

: +B SIGNAL LINE : CD SIGNAL LINE

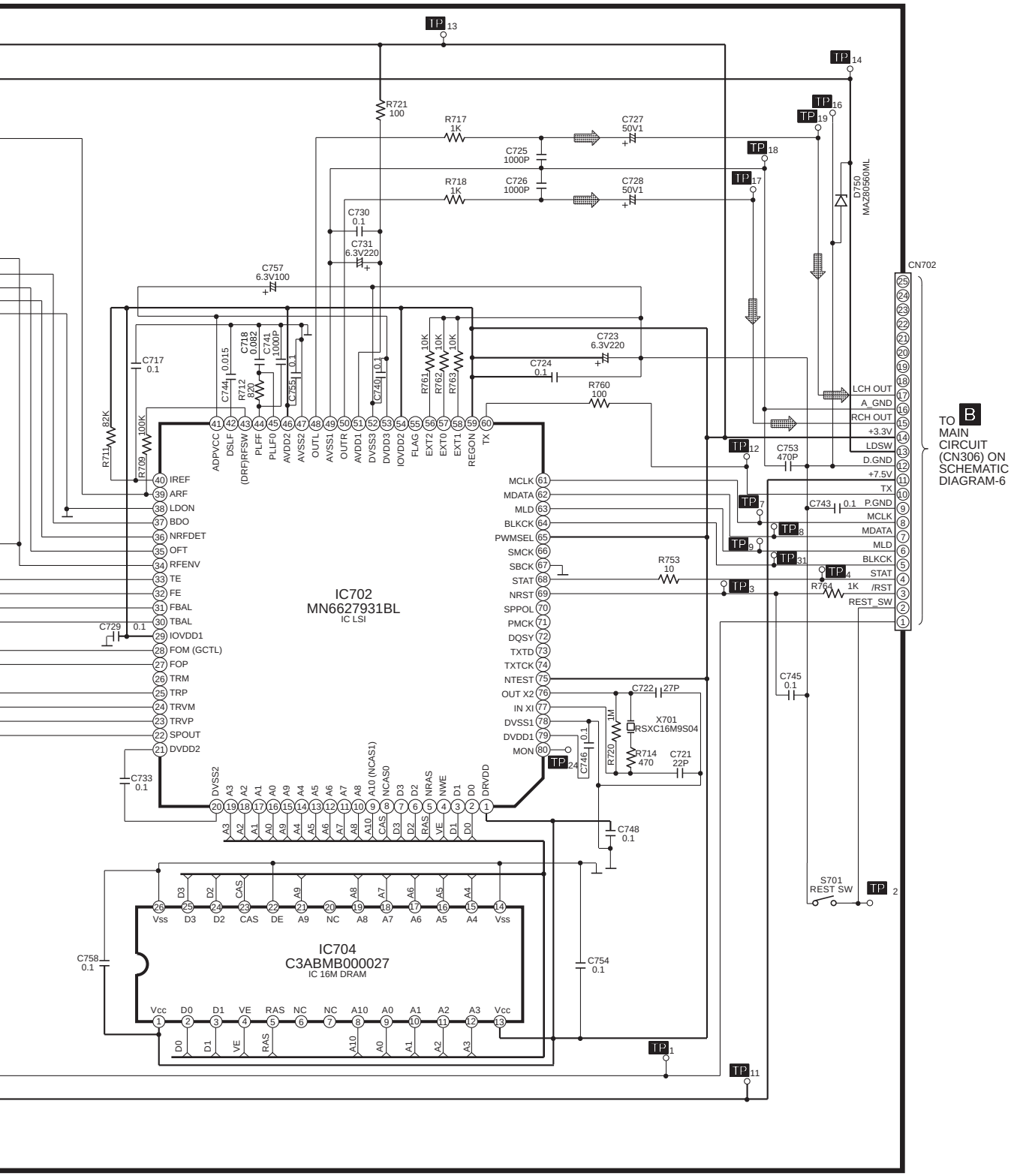


SCHEMATIC DIAGRAM-2

A CD SERVO CIRCUIT

: +B SIGNAL LINE

: CD SIGNAL LINE

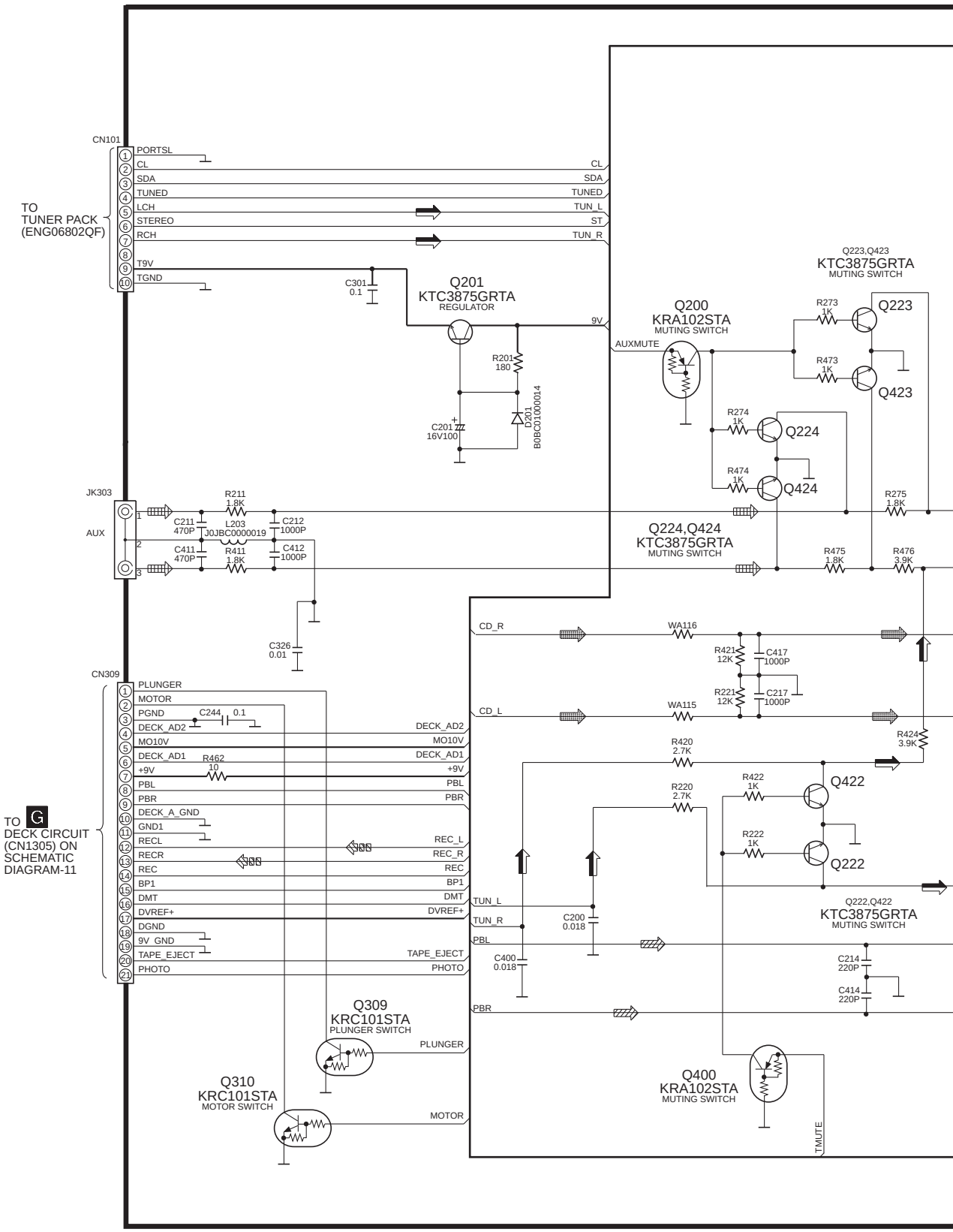


SCHEMATIC DIAGRAM-3

B MAIN CIRCUIT

——— : +B SIGNAL LINE

: FM/AM SIGNAL LINE
: TAPE PLAYBACK SIGNAL LINE
: TAPE RECORD SIGNAL LINE
: CD SIGNAL LINE
: AUX SIGNAL LINE

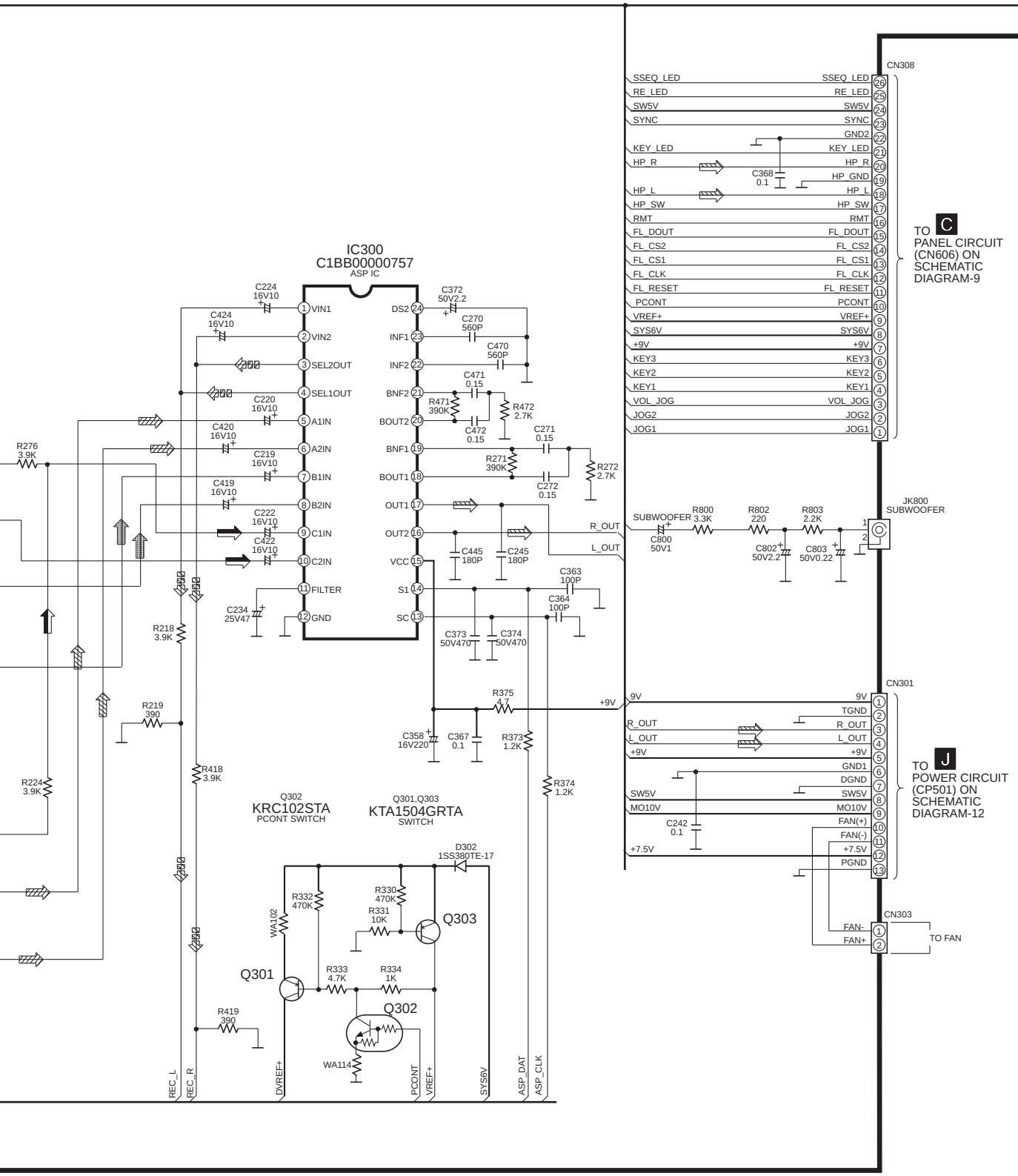


SCHEMATIC DIAGRAM-4

B MAIN CIRCUIT

: +B SIGNAL LINE

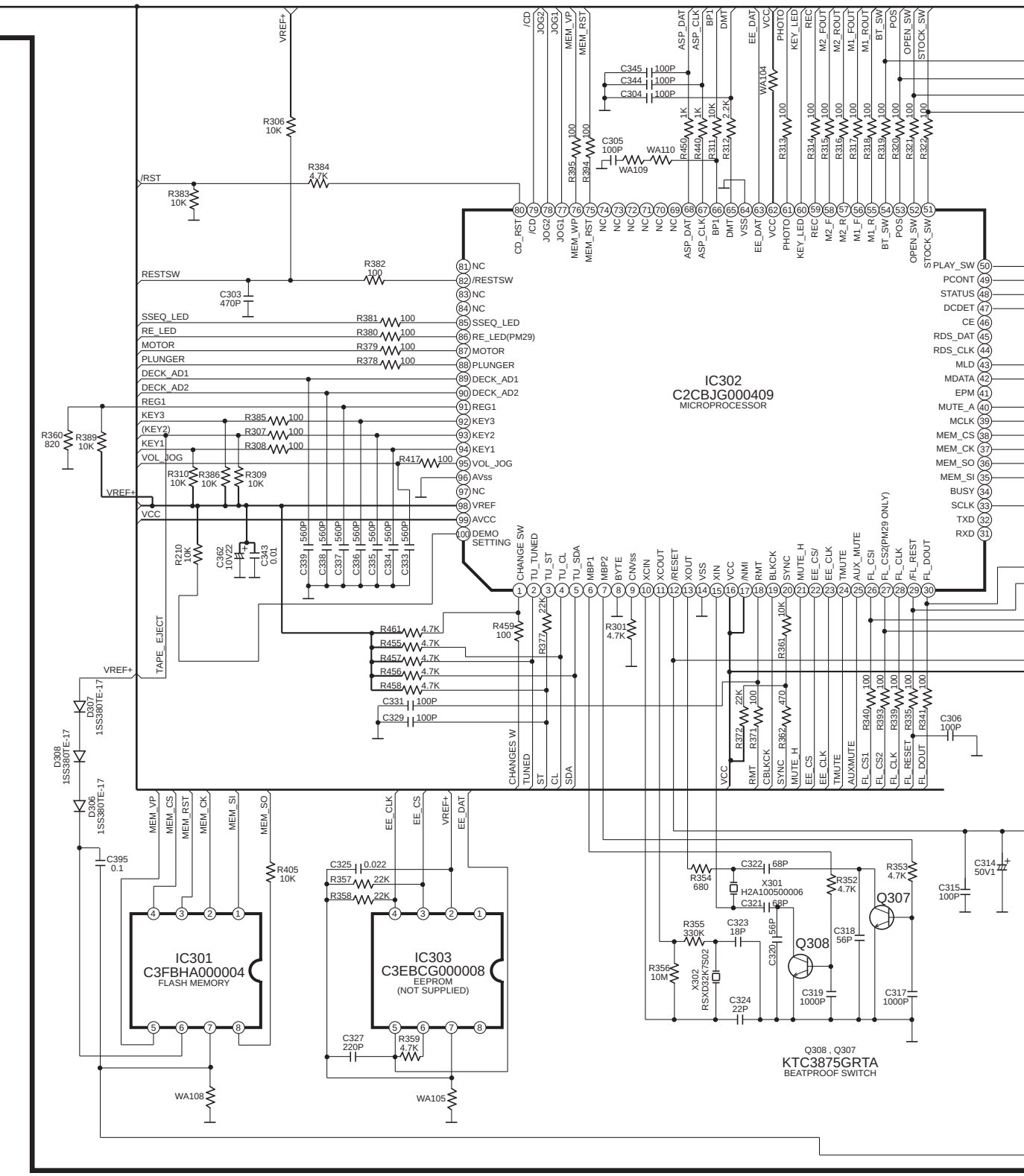
: MAIN SIGNAL LINE
: FM/AM SIGNAL LINE
: TAPE PLAYBACK SIGNAL LINE
: TAPE RECORD SIGNAL LINE
: CD SIGNAL LINE



SCHEMATIC DIAGRAM-5

B MAIN CIRCUIT

——— : +B SIGNAL LINE



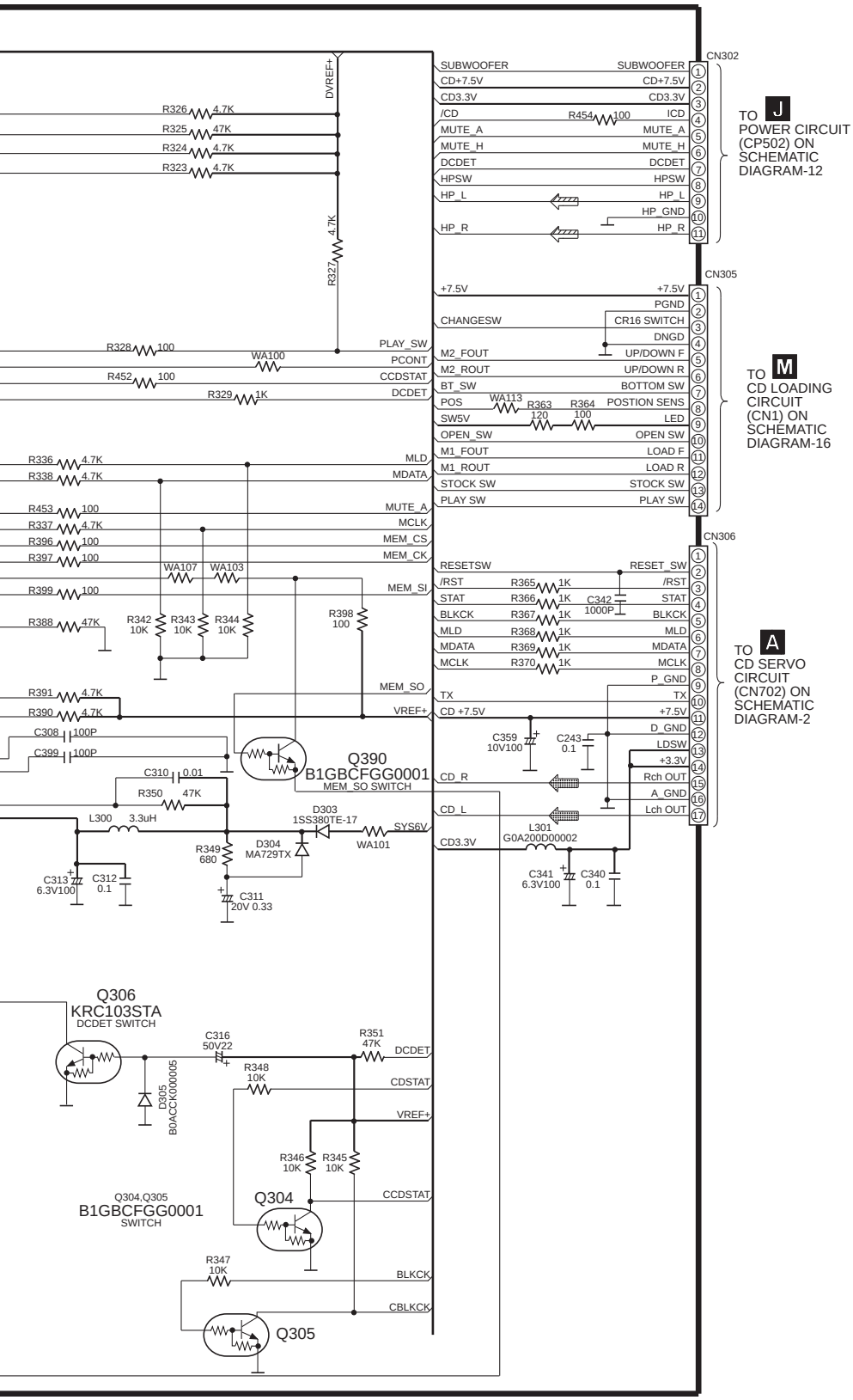
SCHEMATIC DIAGRAM-6

B MAIN CIRCUIT

: +B SIGNAL LINE

: MAIN SIGNAL LINE

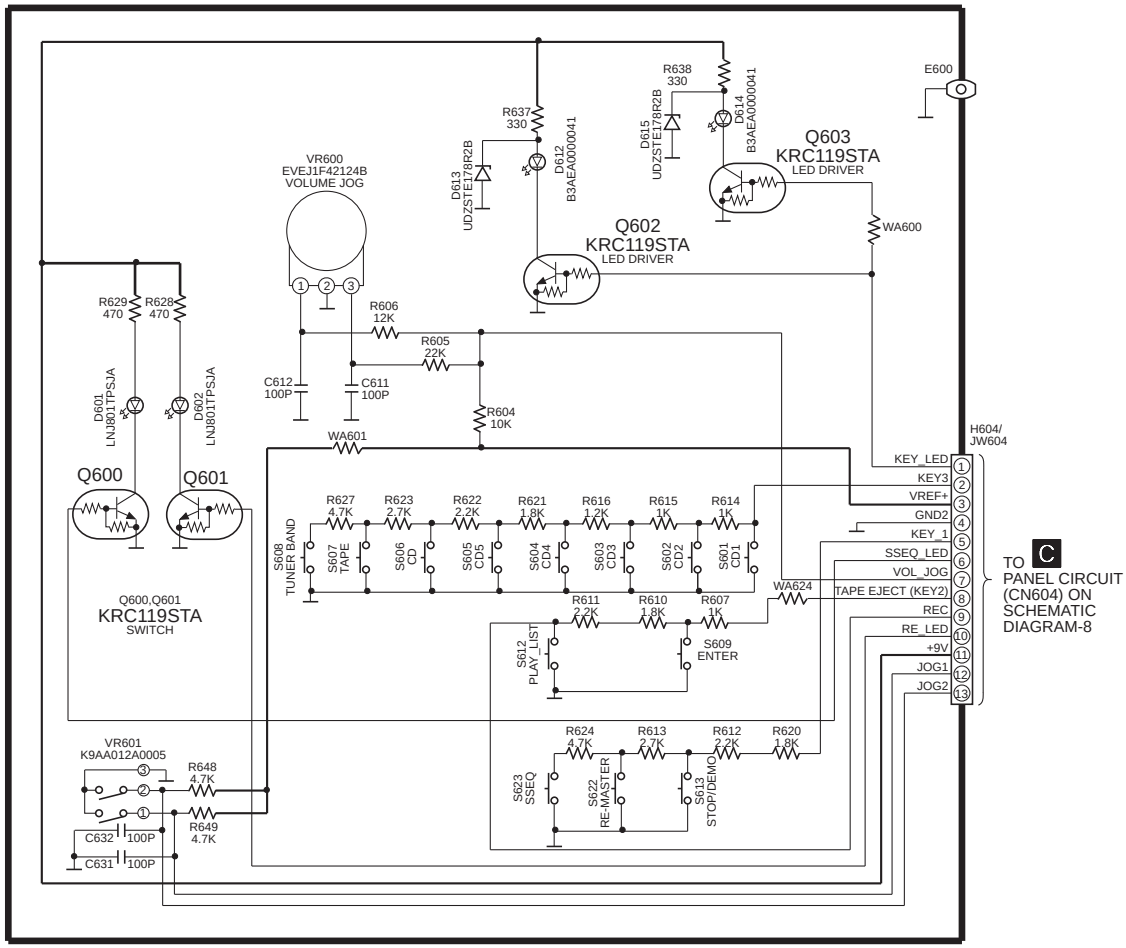
: CD SIGNAL LINE



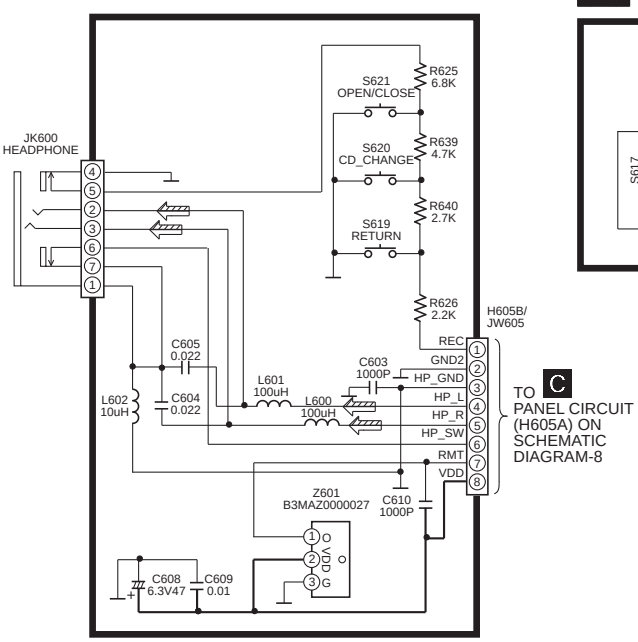
SCHEMATIC DIAGRAM-7

D TACT SWITCH CIRCUIT

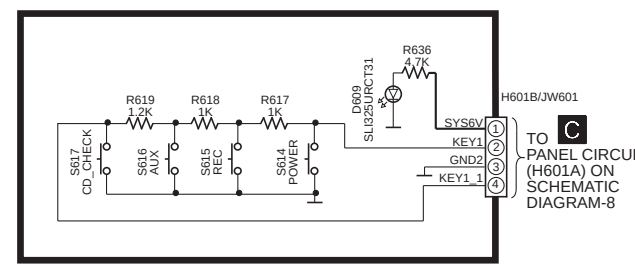
: +B SIGNAL LINE : MAIN SIGNAL LINE



F HEADPHONE CIRCUIT



E SWITCH CIRCUIT



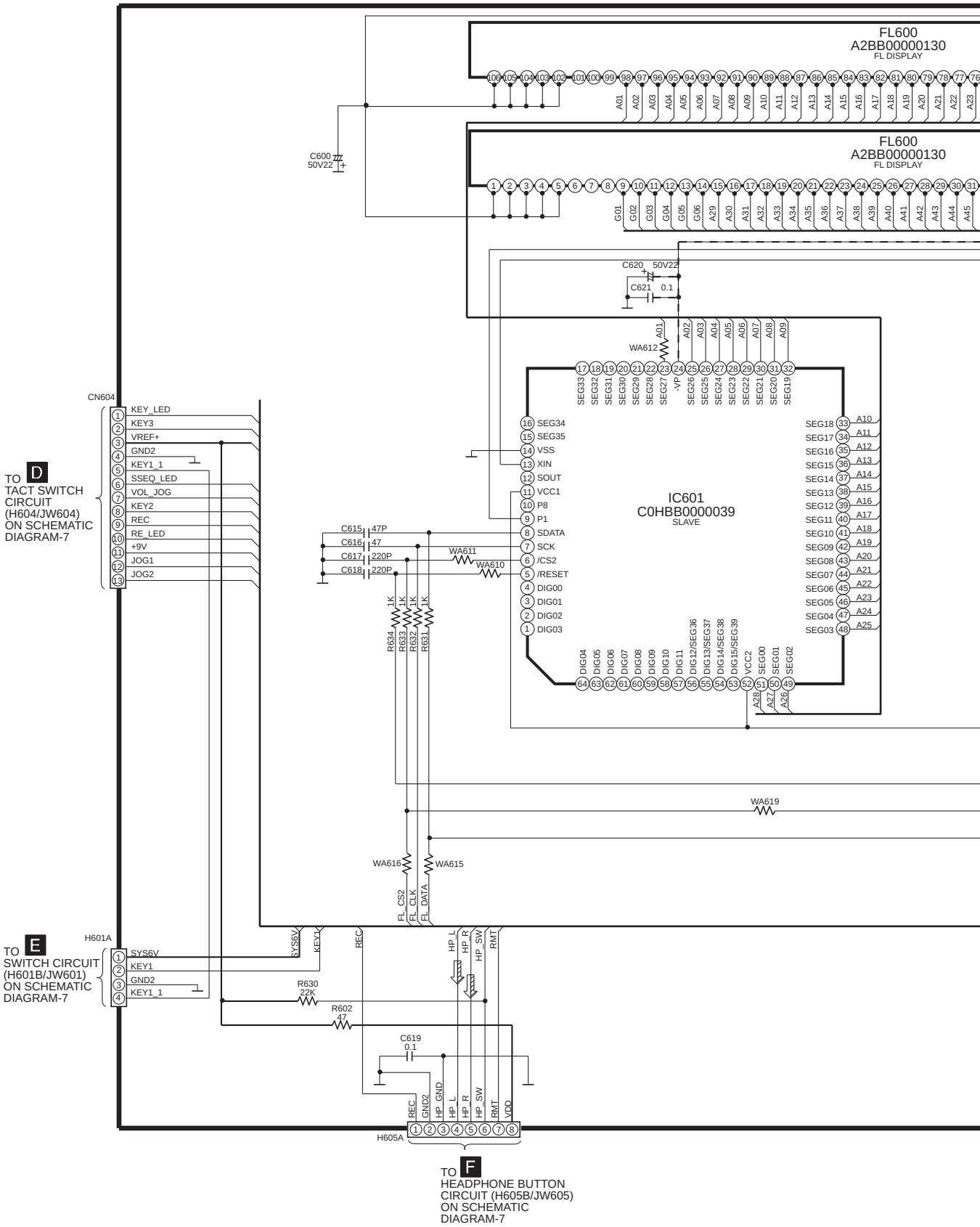
SCHEMATIC DIAGRAM-8

C PANEL CIRCUIT

: - B SIGNAL LINE

: +B SIGNAL LINE

: MAIN SIGNAL LINE



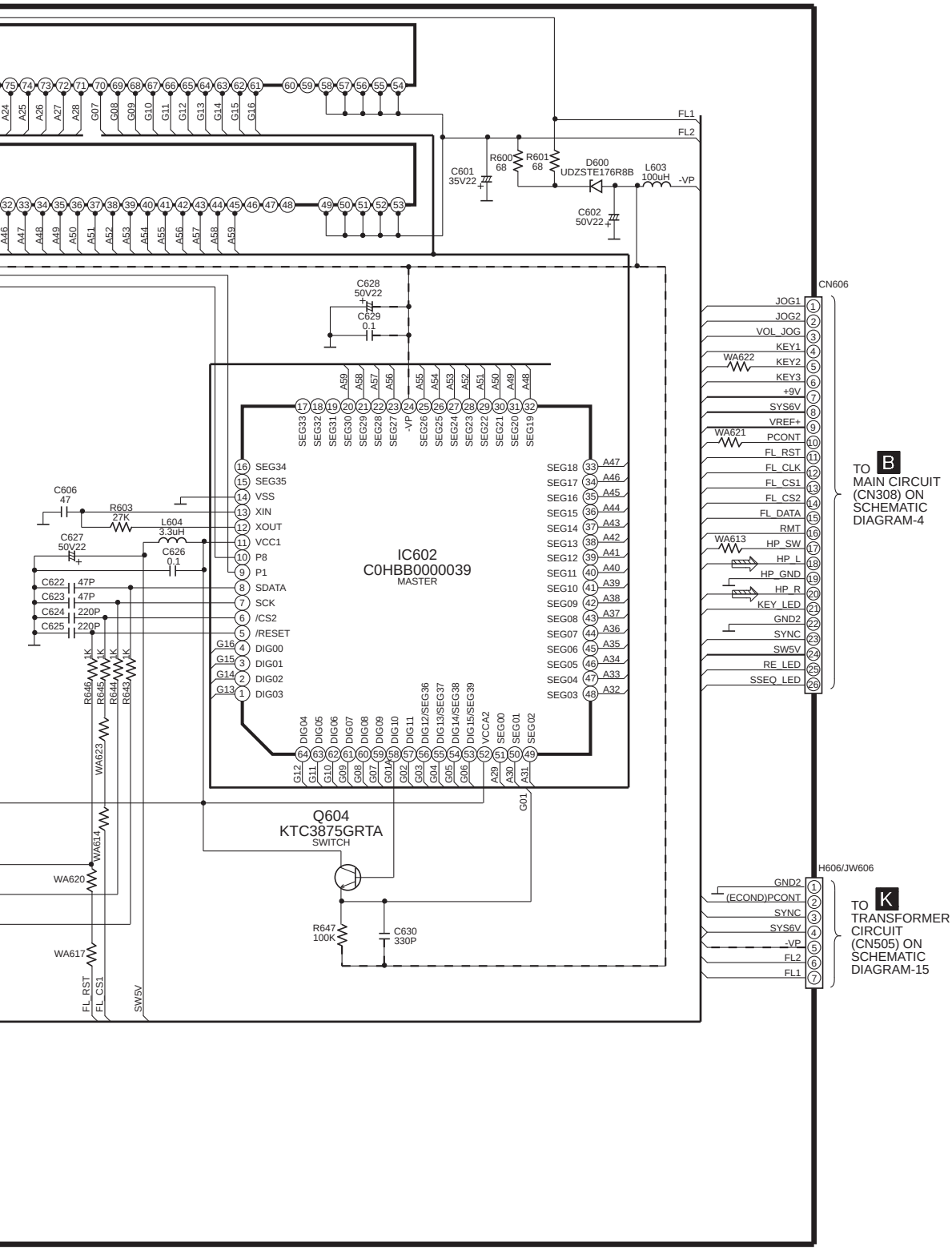
SCHEMATIC DIAGRAM-9

C PANEL CIRCUIT

: - B SIGNAL LINE

: +B SIGNAL LINE

: MAIN SIGNAL LINE



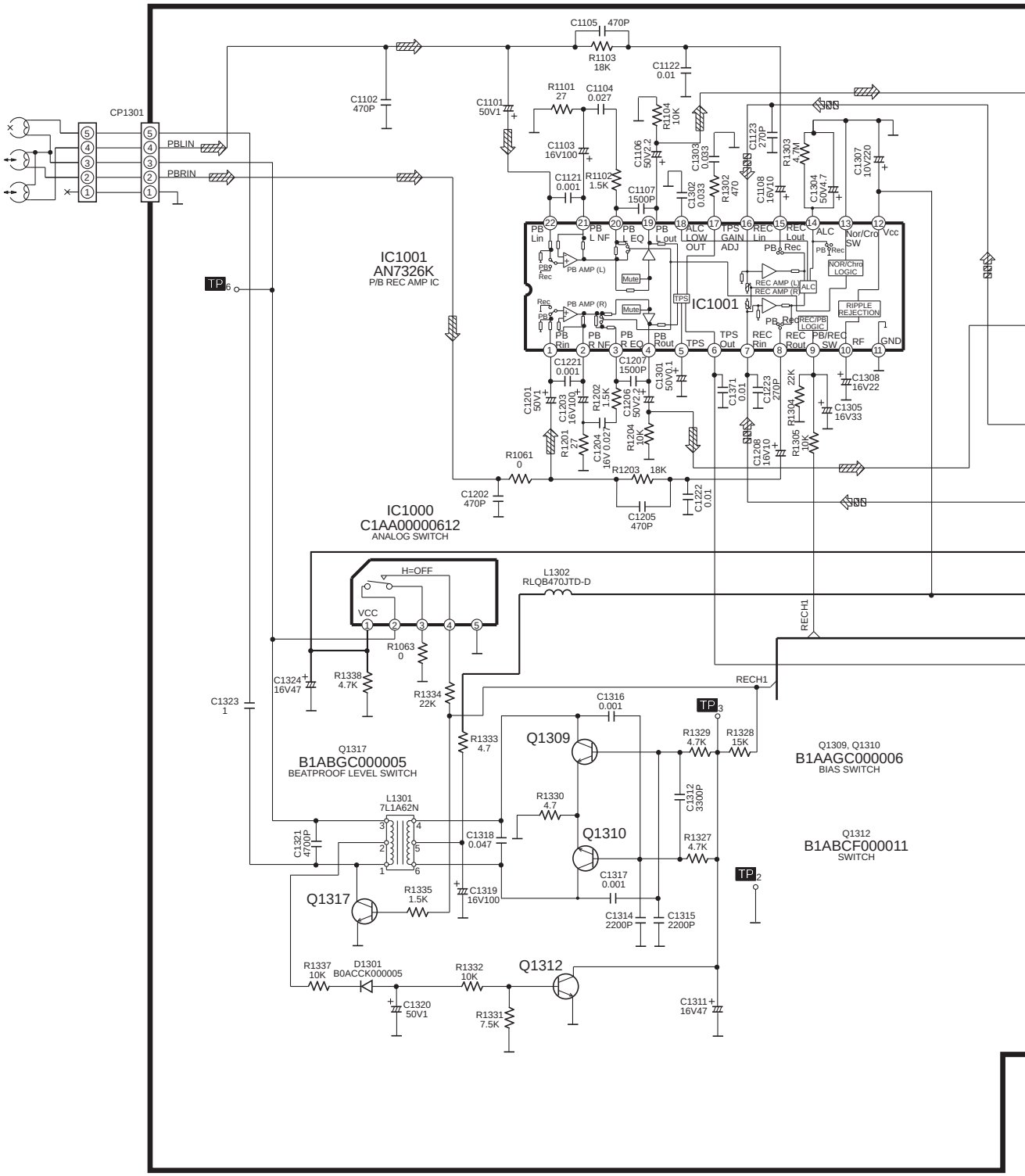
SCHEMATIC DIAGRAM-10

G DECK CIRCUIT

: +B SIGNAL LINE

: TAPE PLAYBACK SIGNAL LINE

: TAPE RECORD SIGNAL LINE



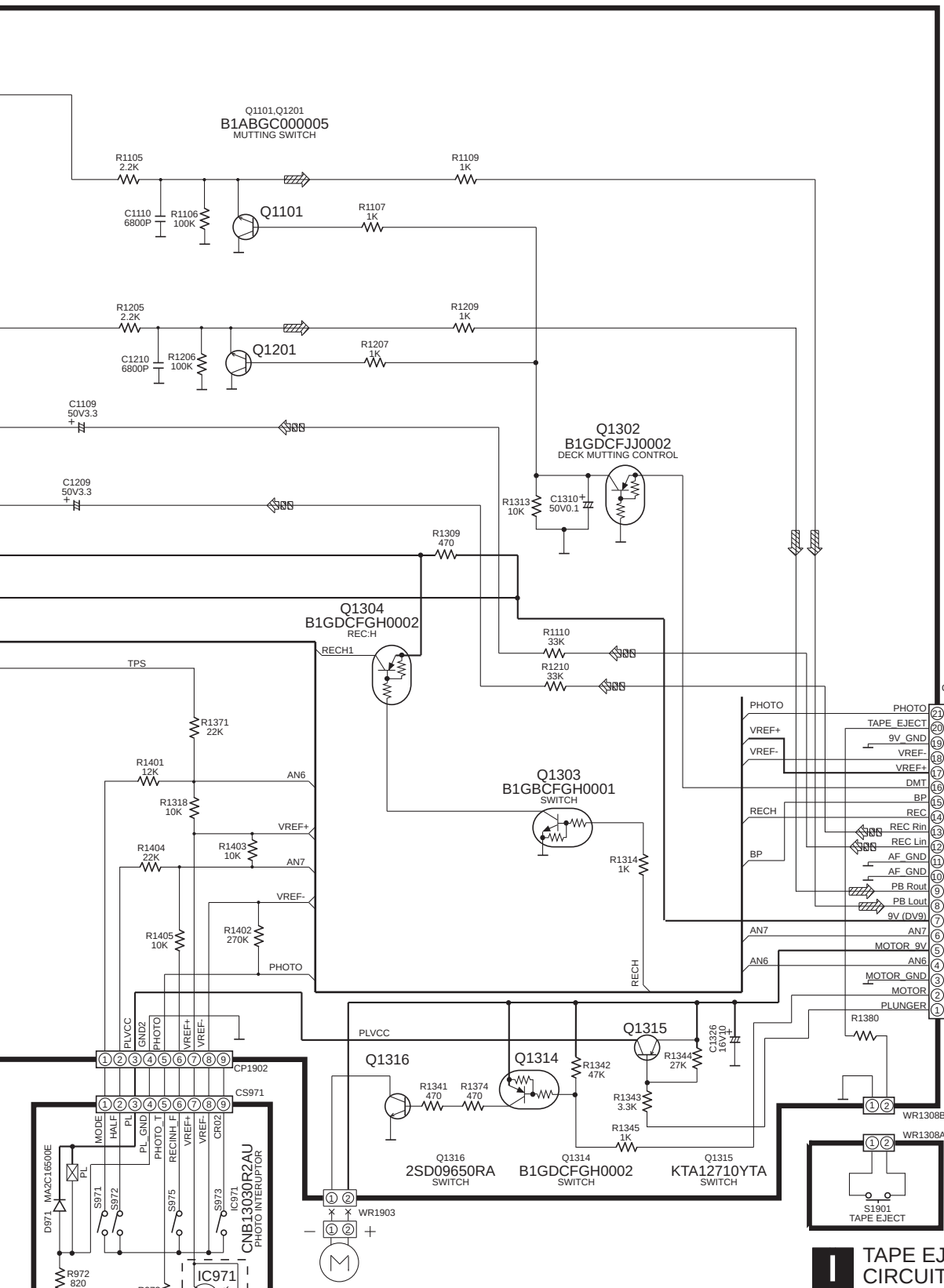
SCHEMATIC DIAGRAM-11

G DECK CIRCUIT

: +B SIGNAL LINE

: TAPE PLAYBACK SIGNAL LINE

: TAPE RECORD SIGNAL LINE



I TAPE EJECT CIRCUIT

H DECK MECHANISM CIRCUIT

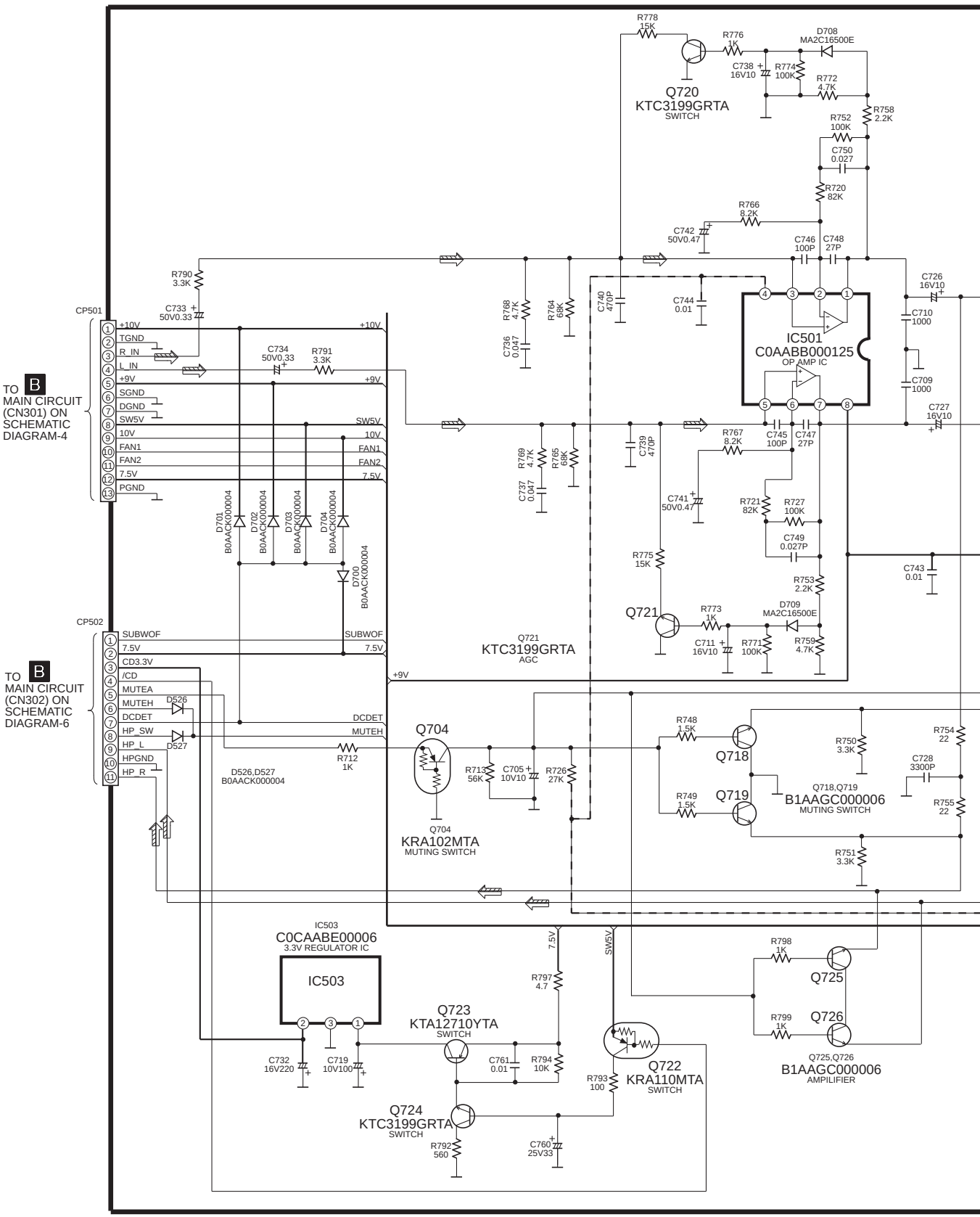
SCHEMATIC DIAGRAM-12

J POWER CIRCUIT

: - B SIGNAL LINE

: +B SIGNAL LINE

: MAIN SIGNAL LINE



SCHEMATIC DIAGRAM-13

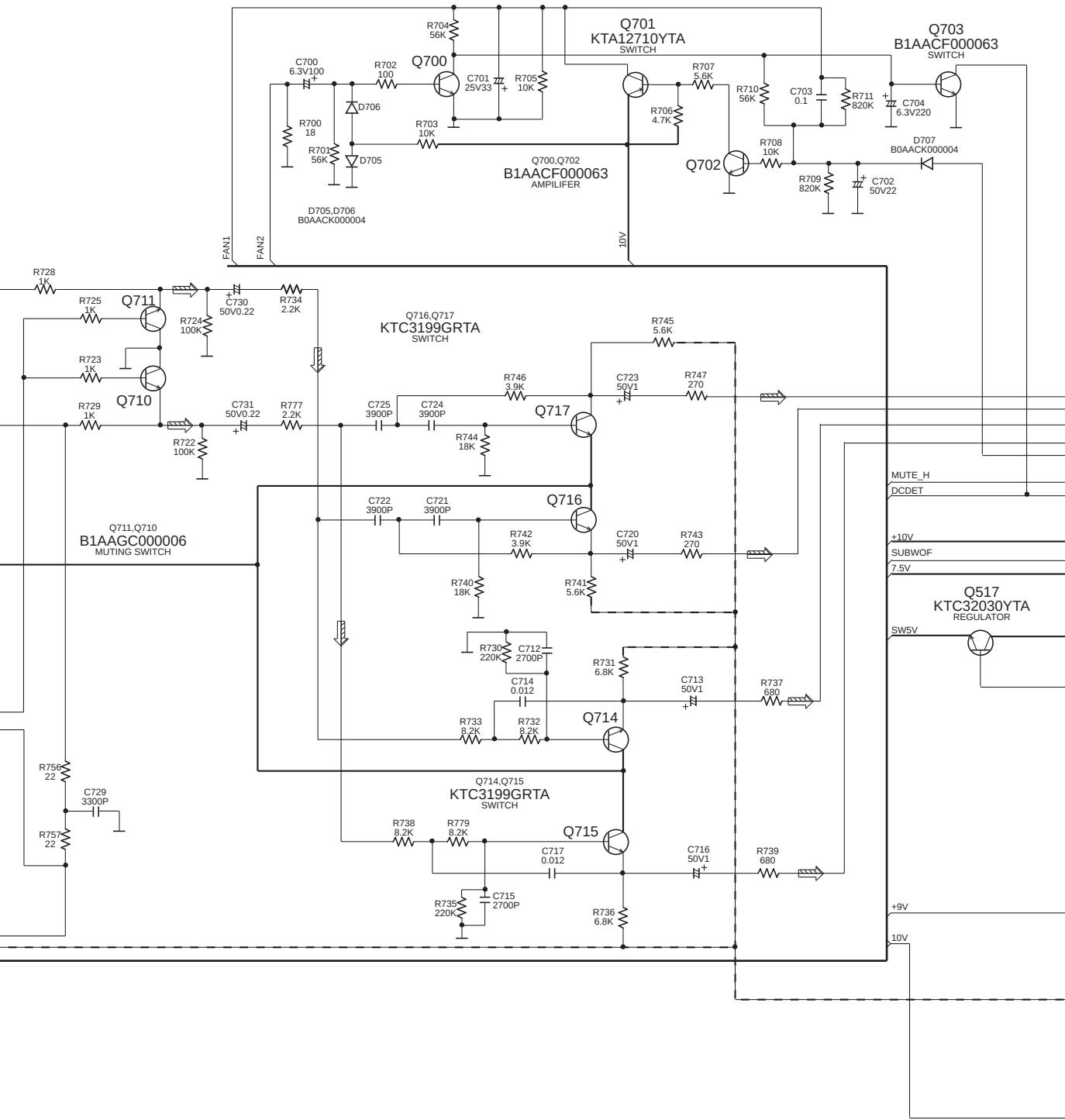
J

POWER CIRCUIT

: - B SIGNAL LINE

: +B SIGNAL LINE

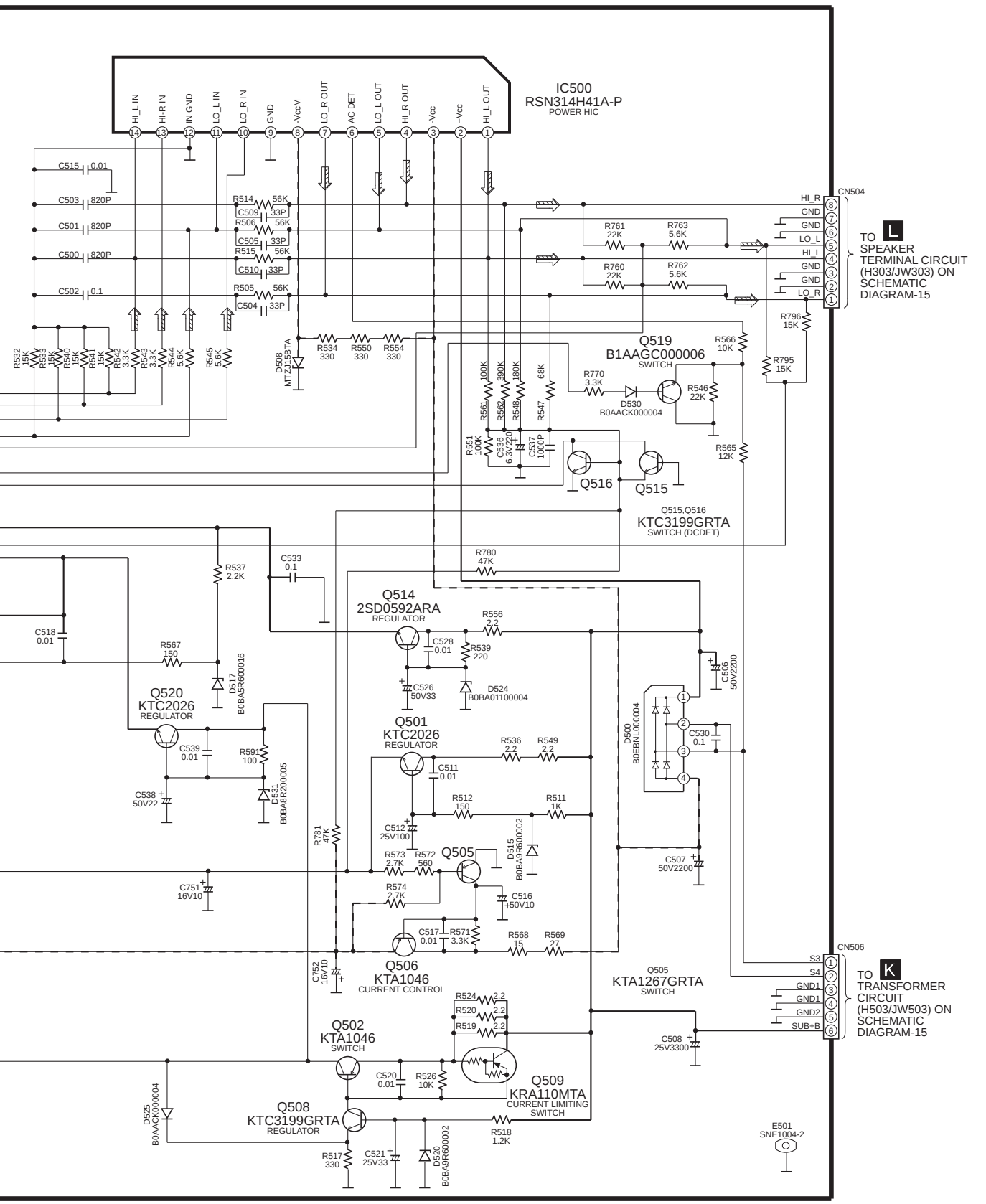
: MAIN SIGNAL LINE



SCHEMATIC DIAGRAM-14

J POWER CIRCUIT

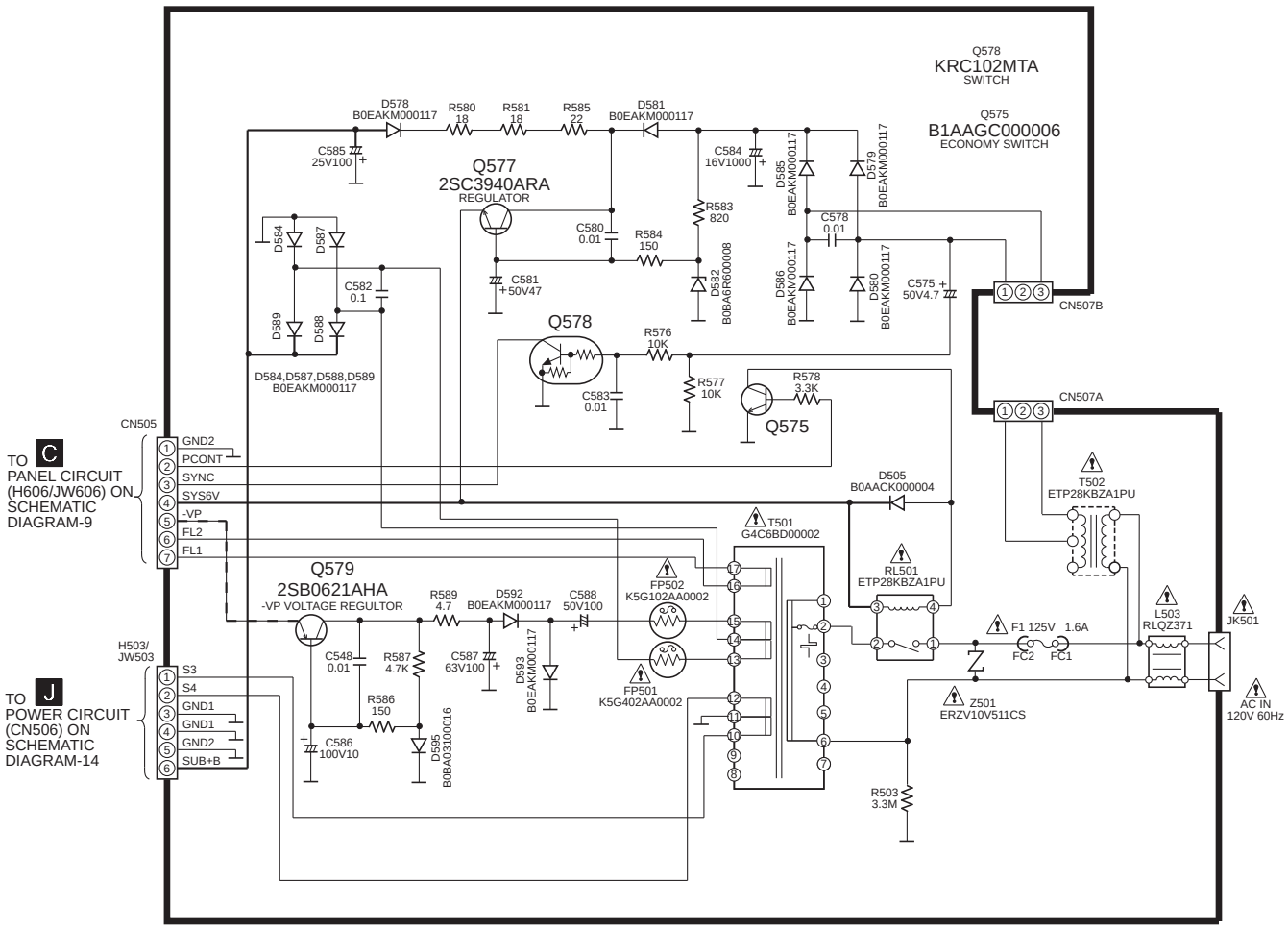
: - B SIGNAL LINE
: +B SIGNAL LINE
: MAIN SIGNAL LINE



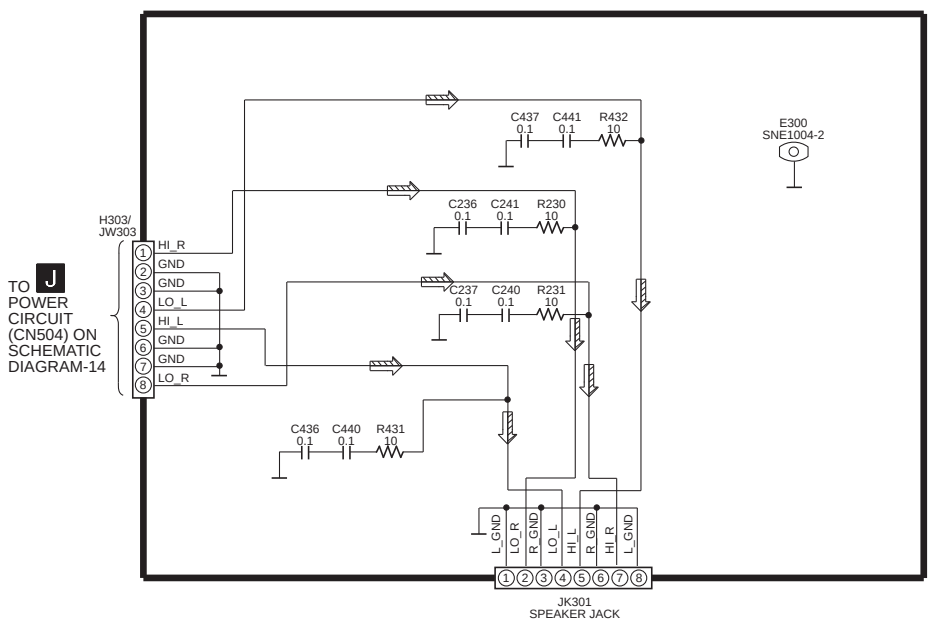
SCHEMATIC DIAGRAM-15

K TRANSFORMER CIRCUIT

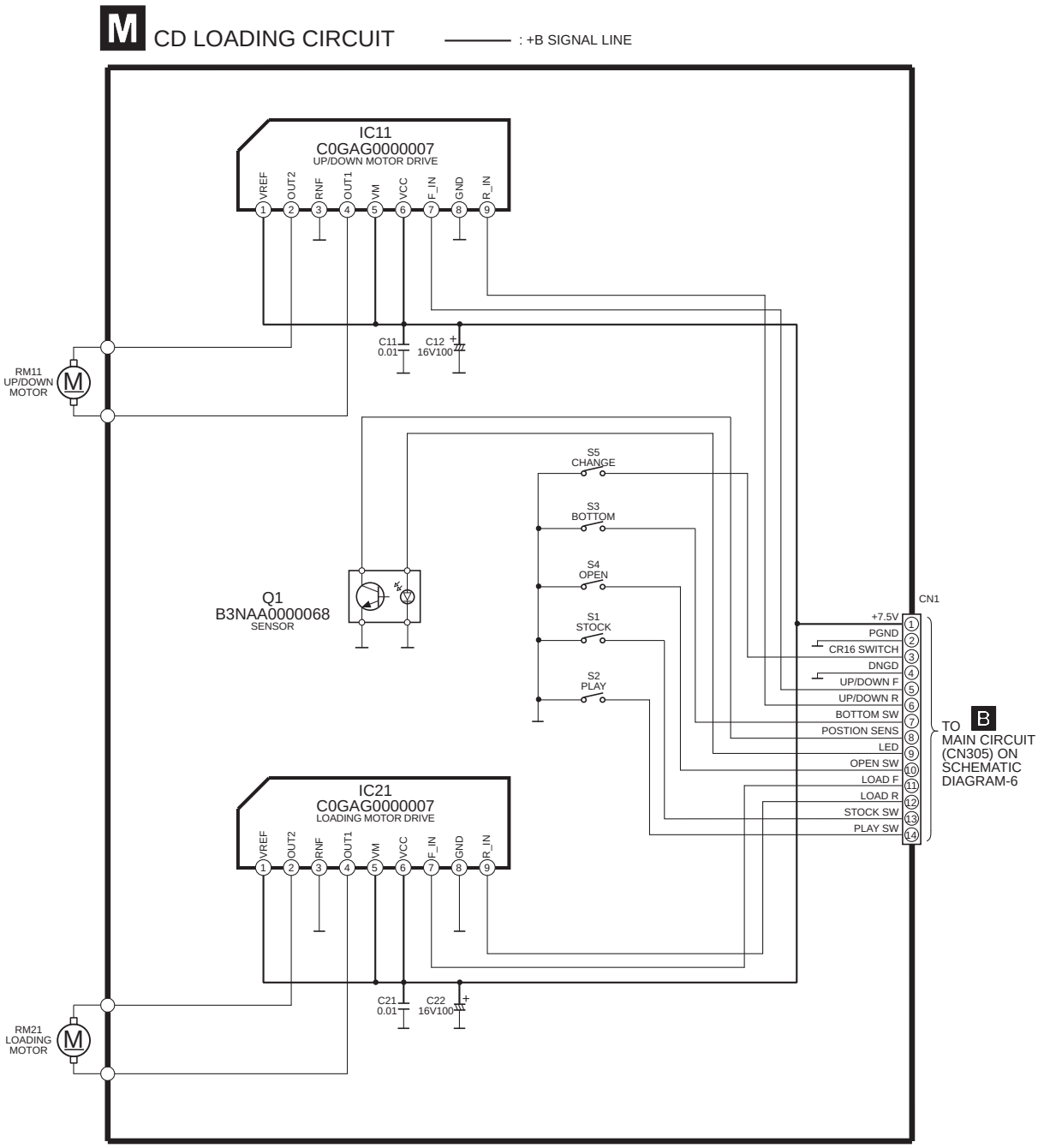
: -B SIGNAL LINE
: +B SIGNAL LINE
: MAIN SIGNAL LINE



L SPEAKER TERMINAL CIRCUIT

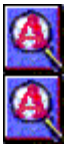


SCHEMATIC DIAGRAM-16



19 Printed Circuit Board

19.1 CD Servo P.C.B. (Side A and Side B)



19.2 Main P.C.B.

19.3 Panel P.C.B. and Tact Switch P.C.B.

19.4 Switch P.C.B., Headphone P.C.B. and Speaker Terminal P.C.B.

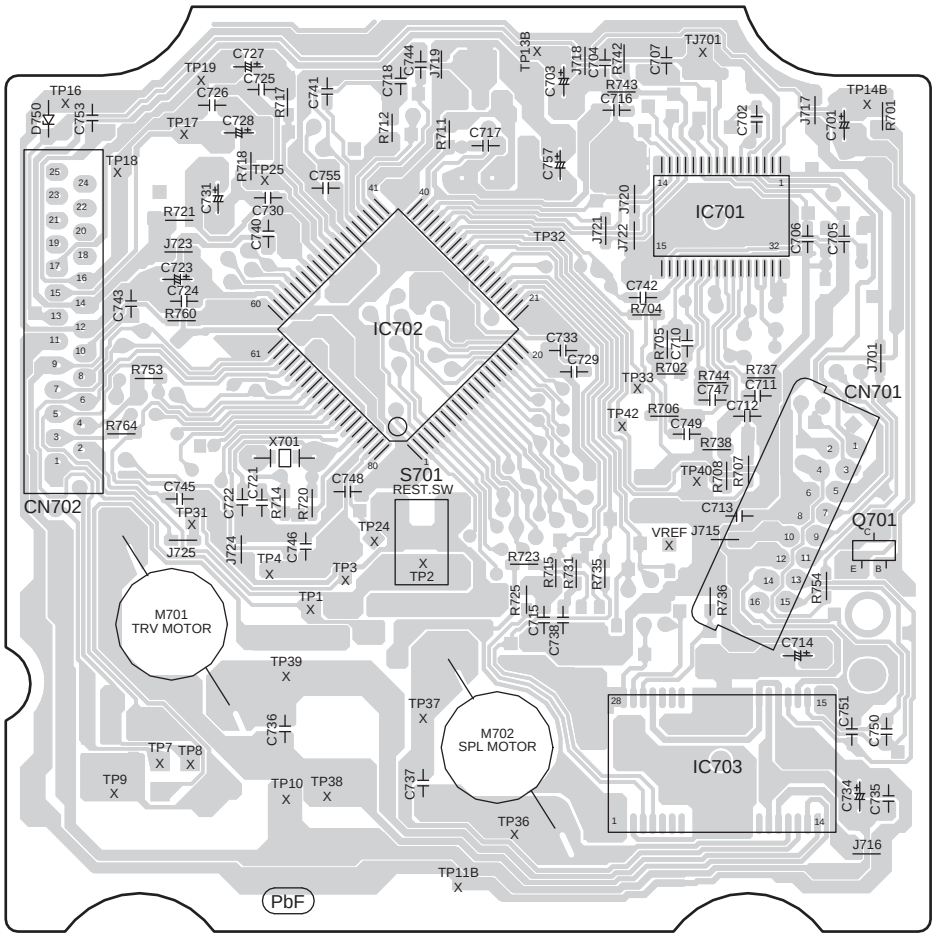
19.5 Deck P.C.B. and Tape Eject P.C.B.

19.6 Deck Mechanism P.C.B. and CD Loading P.C.B.

19.7 Power P.C.B.

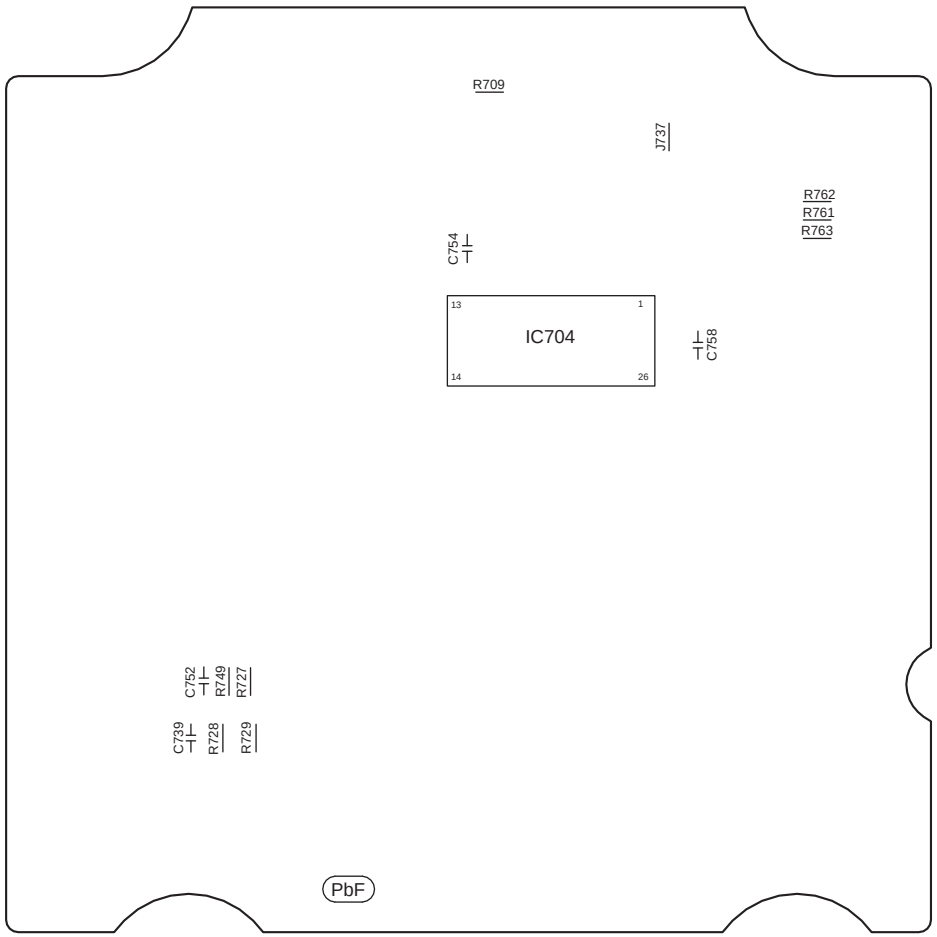
19.8 Transformer P.C.B.

A CD SERVO P.C.B (REPX0363A)



(SIDE A)

A CD SERVO P.C.B (REPX0363A)



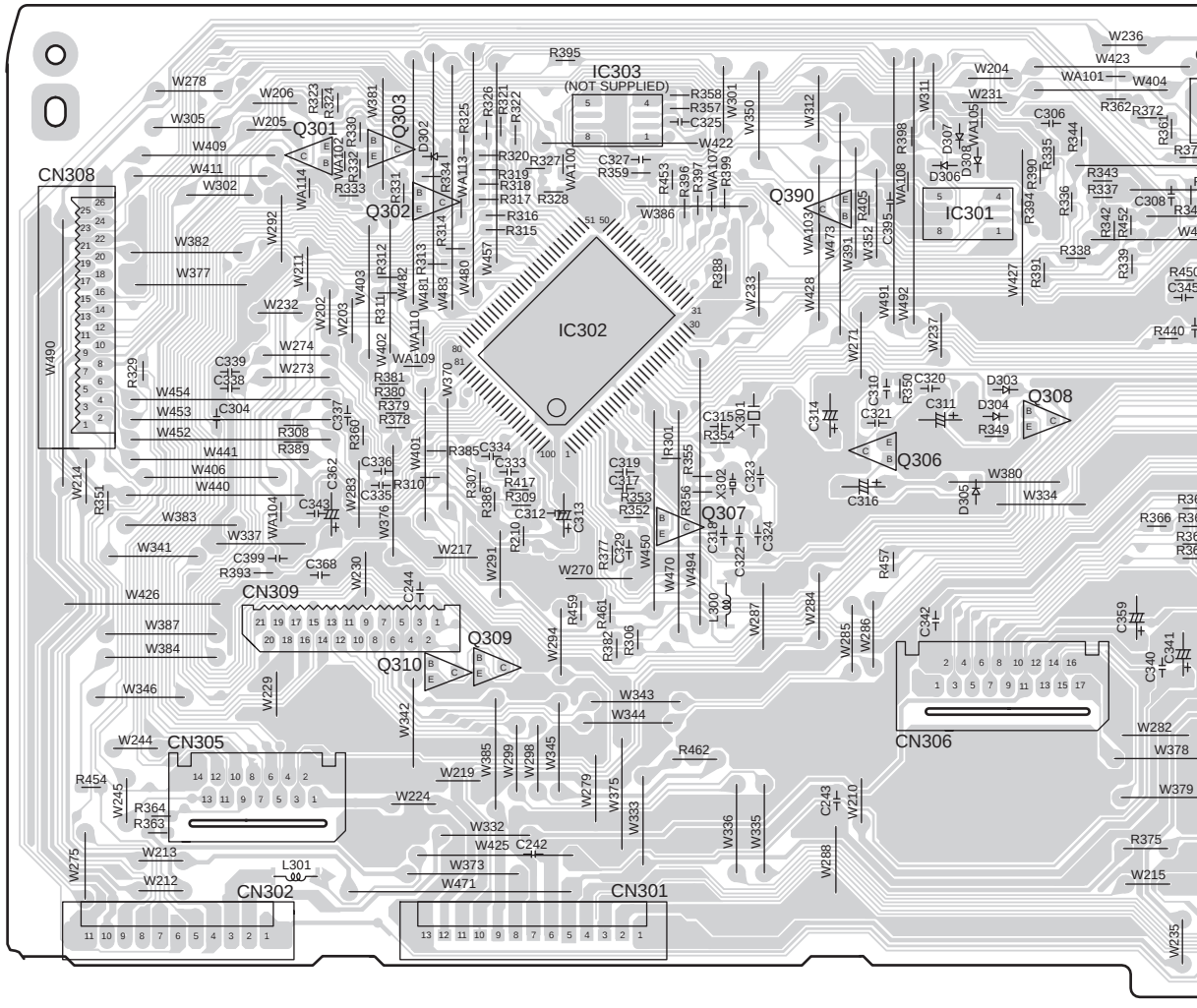
(SIDE B)

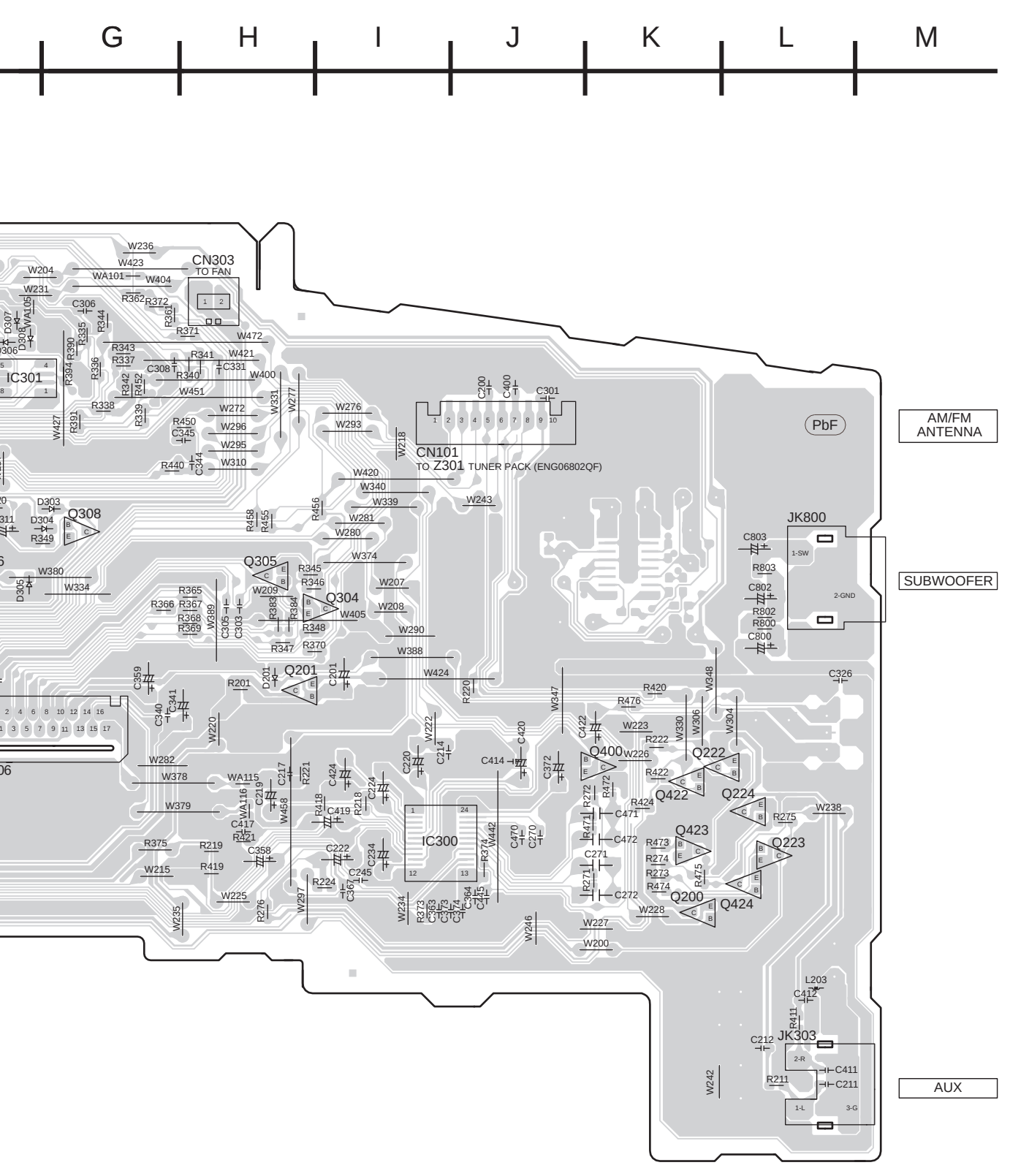
```
w_kolorze
ma_schematy
jezyki
oryginal
poprawne_modele
poprawny_producent
zawiera_pc
numer_instrukcji
wersja_na_kraje
wielkoarkuszowe_strony  // dla ew. statystyk
```

A B C D E F G

1 2 3 4 5 6 7 8 9

B MAIN P.C.B (REPV0019B)

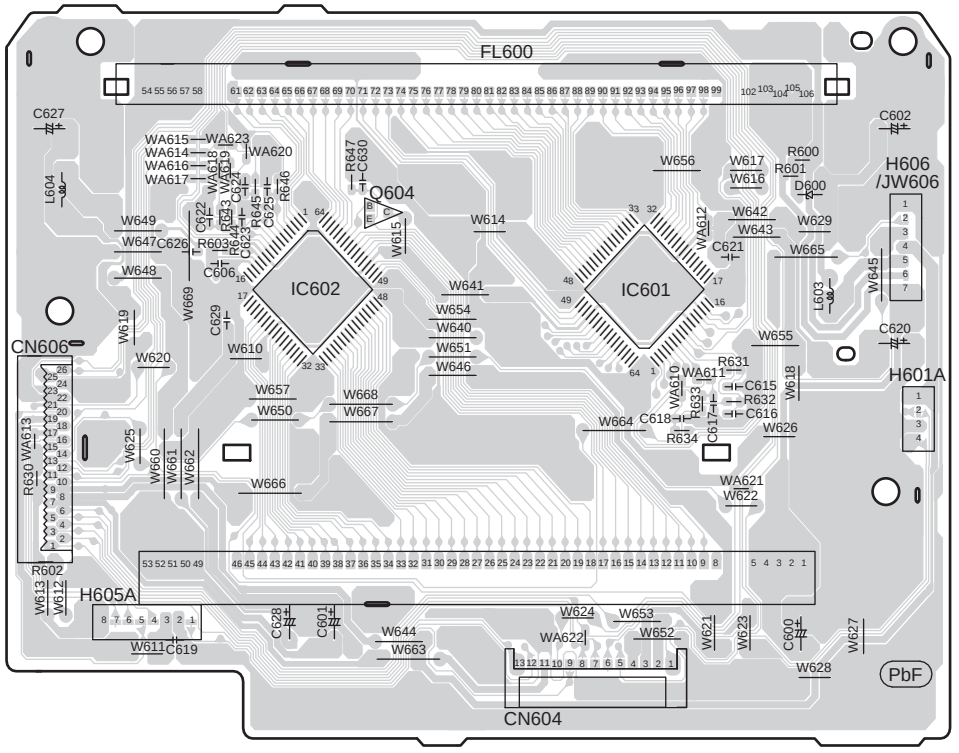



G
H
I
J
K
L
M
CN303
TO FAN
CN101
TO Z301 TUNER PACK (ENG06802QF)
IC301
IC300
Q308
Q305
Q304
Q201
Q400
Q222
Q422
Q224
Q423
Q223
Q200
Q424
JK800
JK303
PbF
AM/FM ANTENNA
SUBWOOFER
AUX
1-SW
2-GND
2-R
1-L
3-G

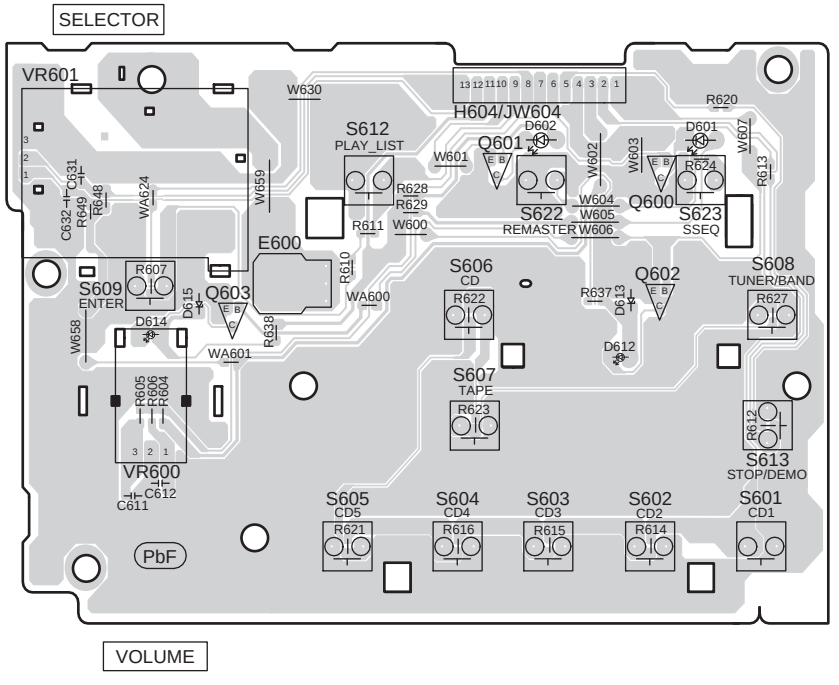
A B C D E F G

1 2 3 4 5 6 7 8 9

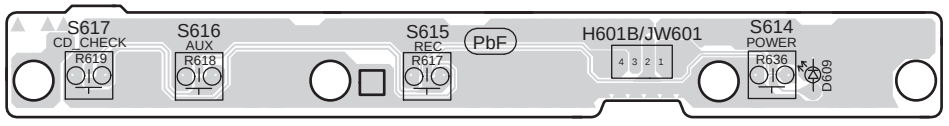
C PANEL P.C.B (REPV0019B)



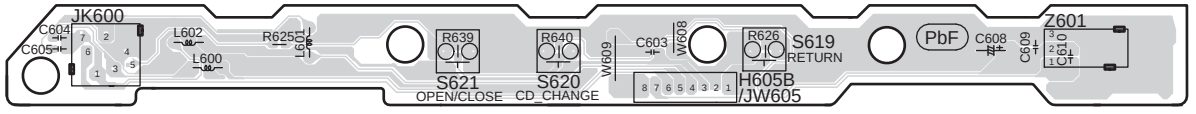
D TACT SWITCH P.C.B (REPV0019B)



E SWITCH P.C.B (REPV0019B)



F HEADPHONE P.C.B (REPV0019B)



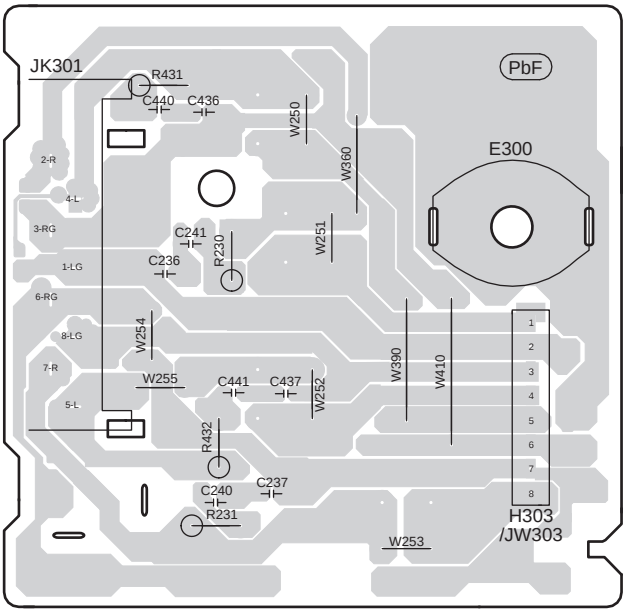
HEADPHONE

SENSOR

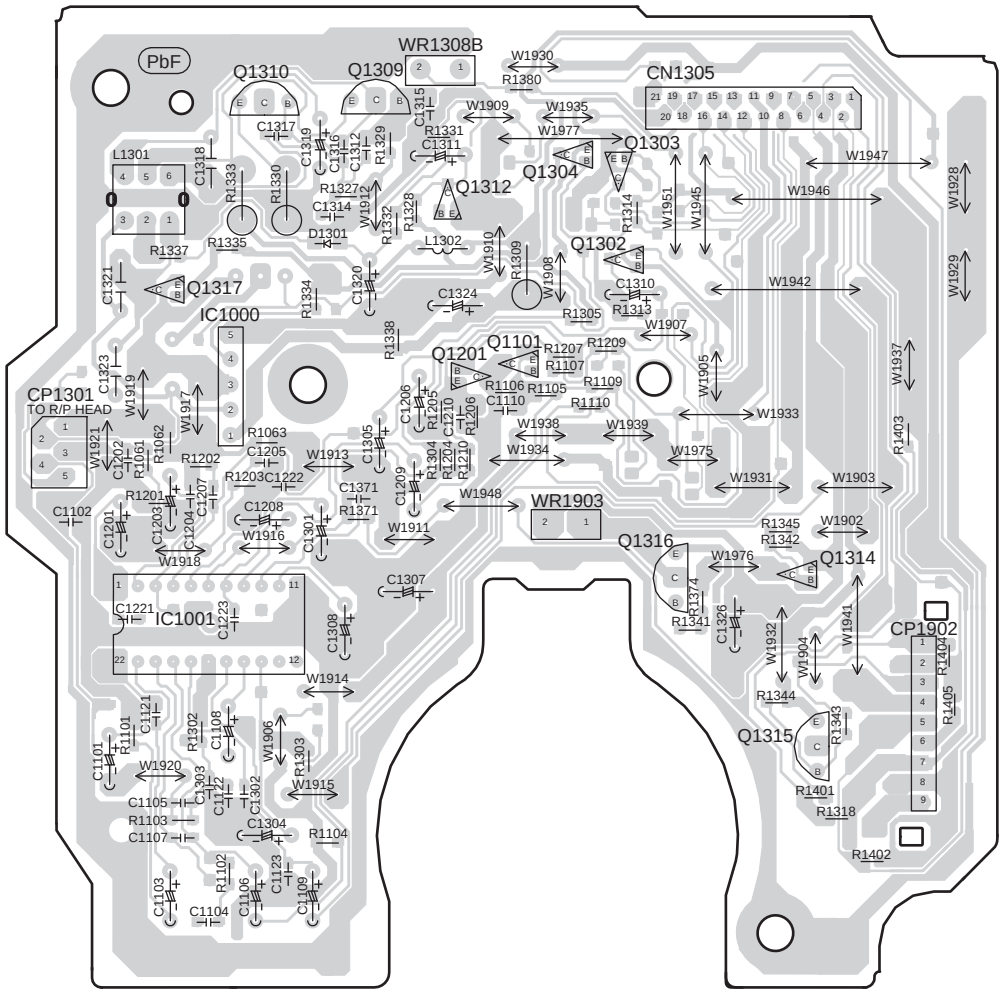
L SPEAKER TERMINAL P.C.B (REPV0019B)

LOW CHANNEL SPEAKERS

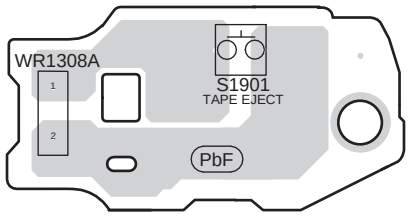
HIGH CHANNEL SPEAKERS



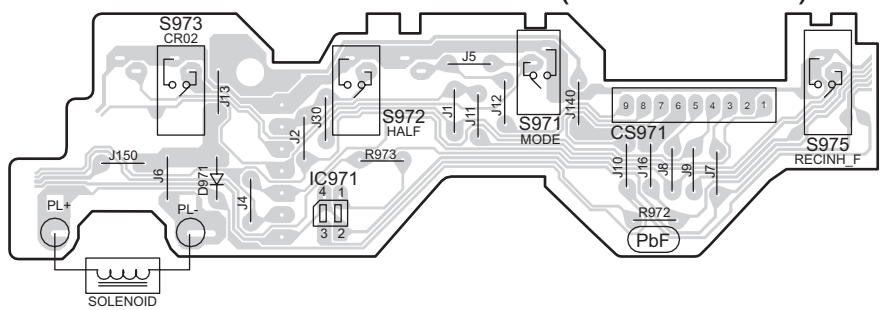
G DECK P.C.B (REPV0016B)



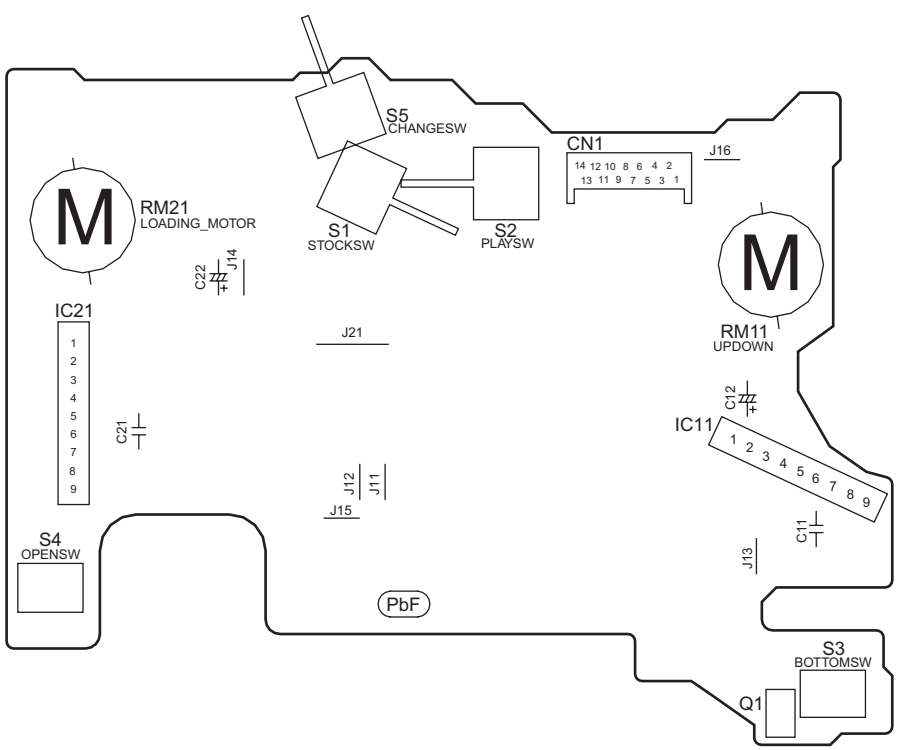
I TAPE EJECT P.C.B (REPV0016B)



H DECK MECHANISM P.C.B (REPX0321H)



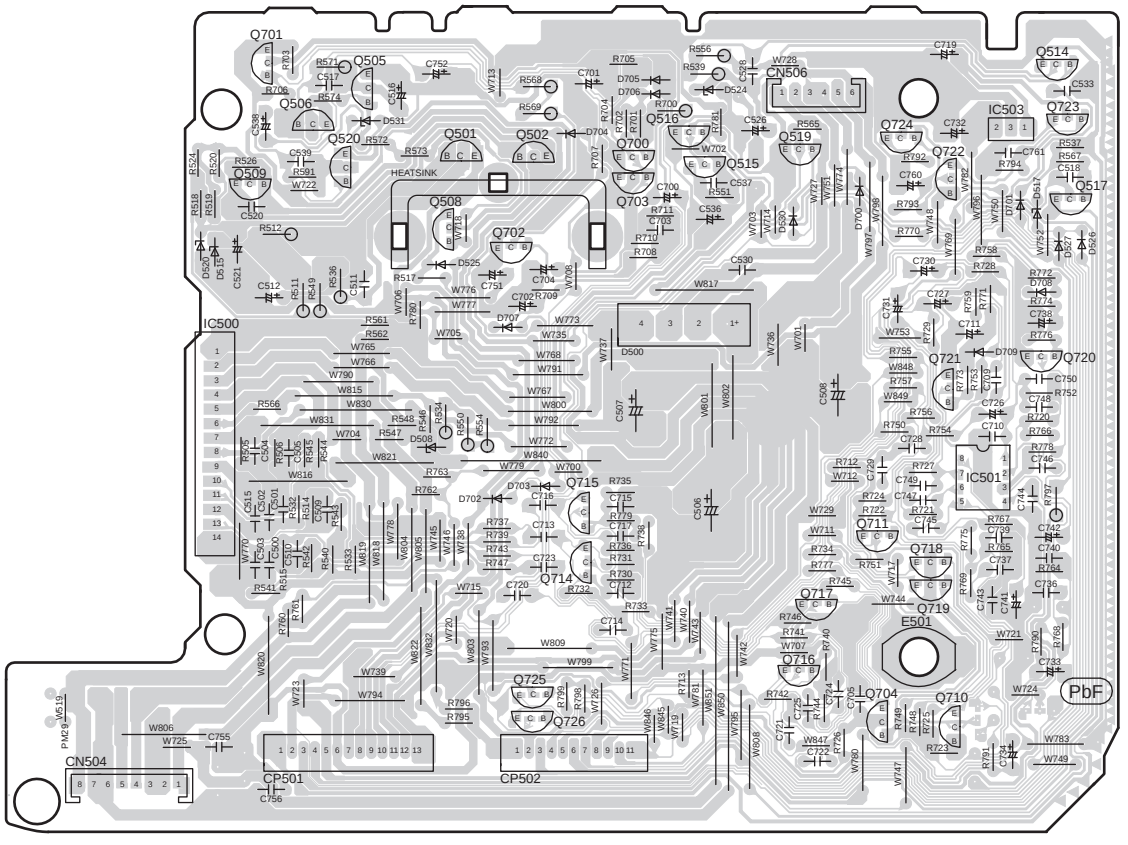
M CD LOADING P.C.B (REP3569A)



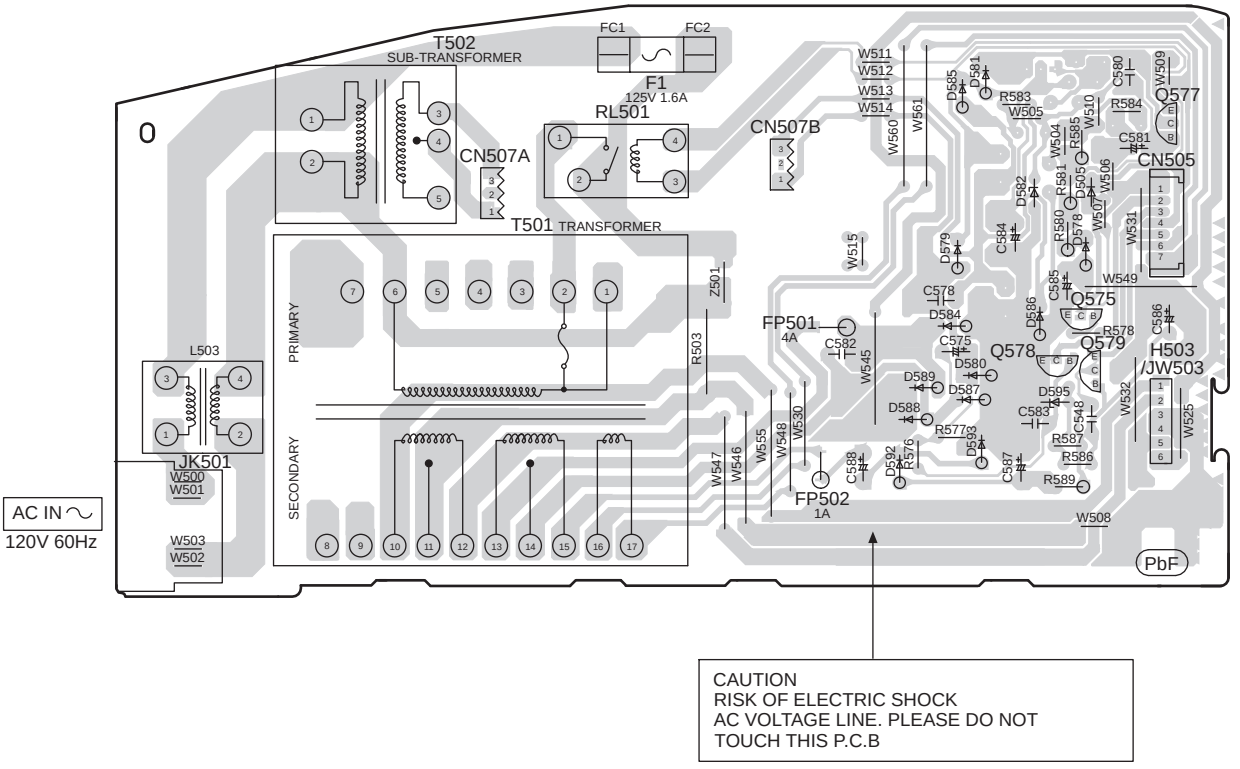
A B C D E F G

1 2 3 4 5 6 7 8 9

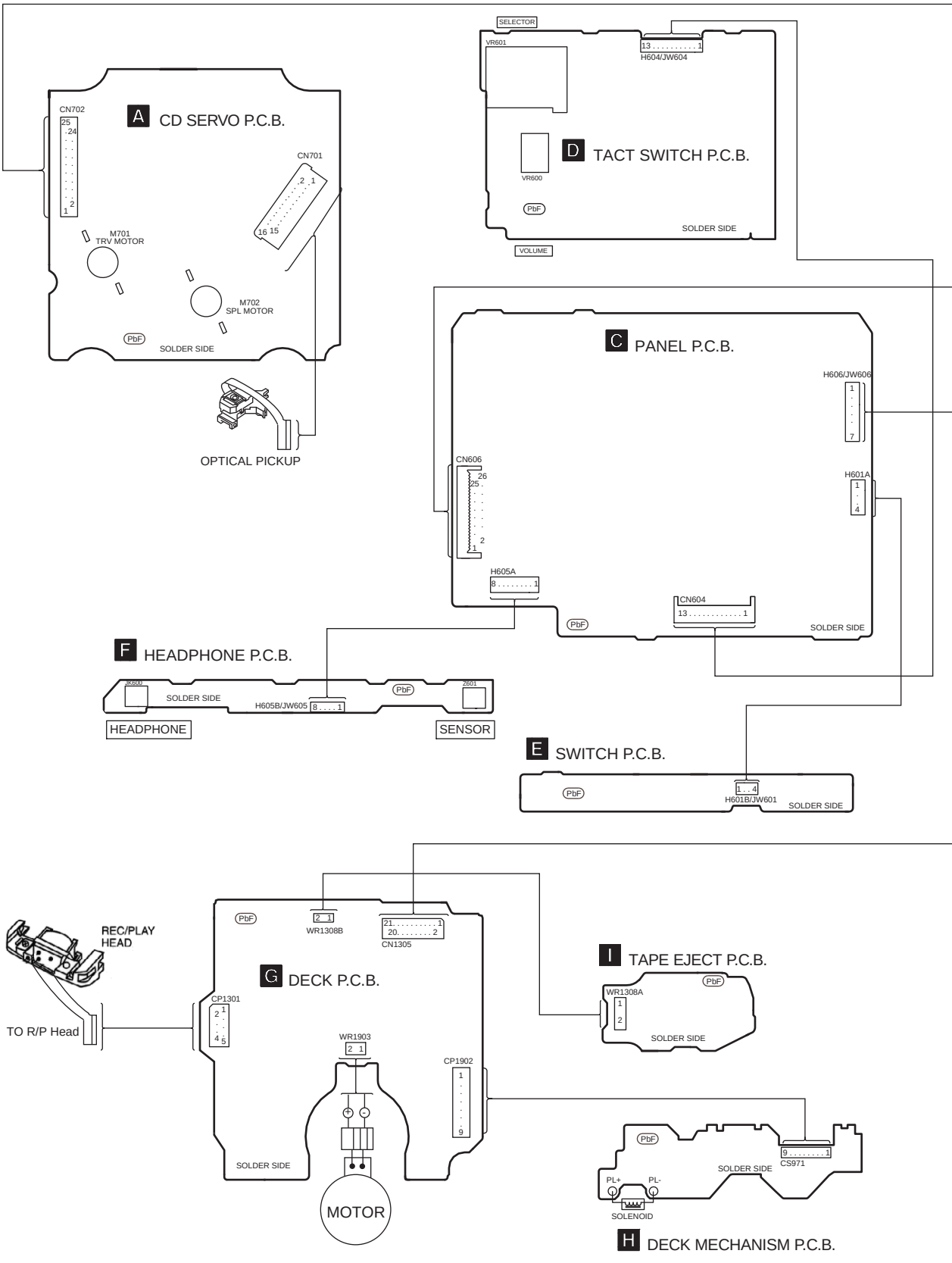
J POWER P.C.B (REPV0018K)

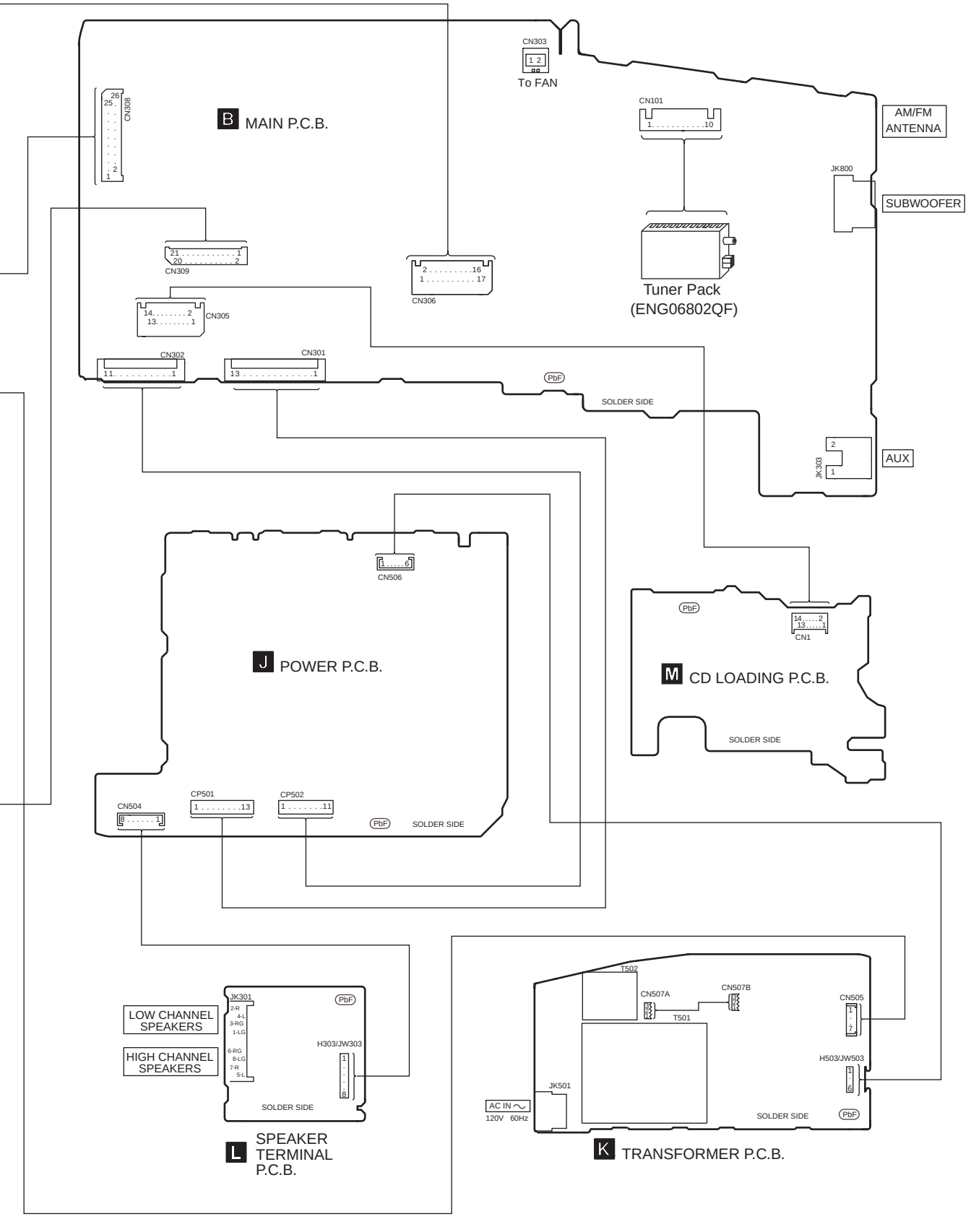


K TRANSFORMER P.C.B (REPV0018K)



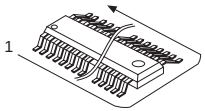
20 Wiring Connection Diagram


A CD SERVO P.C.B.
CN702
25
24
2
1
CN701
2
1
16
15
M701
TRV MOTOR
M702
SPL MOTOR
PbF
SOLDER SIDE
OPTICAL PICKUP
SELECTOR
VR601
13 1
H604/JW604
D TACT SWITCH P.C.B.
VR600
PbF
SOLDER SIDE
VOLUME
C PANEL P.C.B.
H606/JW606
1
7
CN606
26
25
2
1
H601A
1
4
H605A
8 1
CN604
13 1
PbF
SOLDER SIDE
F HEADPHONE P.C.B.
JK600
SOLDER SIDE
PbF
H605B/JW605
8 1
JK601
HEADPHONE
SENSOR
E SWITCH P.C.B.
PbF
1 . . 4
H601B/JW601
SOLDER SIDE
REC/PLAY
HEAD
TO R/P Head
PbF
2 1
WR1308B
21. 1
20. 2
CN1305
G DECK P.C.B.
CP1301
2 1
4 5
WR1903
2 1
CP1902
1
9
SOLDER SIDE
MOTOR
I TAPE EJECT P.C.B.
PbF
WR1308A
1
2
SOLDER SIDE
PbF
9 1
CS971
SOLDER SIDE
PL+
PL-
SOLENOID
H DECK MECHANISM P.C.B.

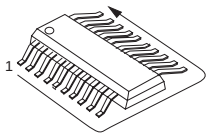

B MAIN P.C.B.
CN303
1 2
To FAN
CN308
26
25
2
1
CN101
1 10
AM/FM ANTENNA
JK800
SUBWOOFER
Tuner Pack
(ENG06802QF)
CN309
21 1
20 2
CN306
2 16
1 17
CN305
14 2
13 1
CN302
11 1
CN301
13 1
PbF
SOLDER SIDE
JK303
2
1
AUX
CN506
1 6
J POWER P.C.B.
CN504
8 1
CP501
1 13
CP502
1 11
PbF
SOLDER SIDE
PbF
14 2
13 1
CN1
M CD LOADING P.C.B.
SOLDER SIDE
LOW CHANNEL SPEAKERS
HIGH CHANNEL SPEAKERS
JK301
2-R
4-L
3-RG
1-LG
6-RG
8-LG
7-R
5-L
PbF
H303/JW303
1 . . . 8
SOLDER SIDE
L SPEAKER TERMINAL P.C.B.
T502
CN507A
CN507B
T501
CN505
1 . . . 7
H503/JW503
1 . . . 6
JK501
AC IN ~
120V 60Hz
SOLDER SIDE
PbF
K TRANSFORMER P.C.B.

21 Illustration of IC ’ s, Transistors and Diodes

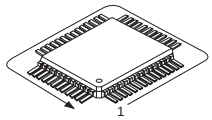
BA5948FPE2 (28P)
AN7326K (26P)



AN22004A-NF (32P)
C1BB00000757 (24P)
C3EBCG000008 (16P)
C3ABMB000027 (26P)



C0HBB0000039(64P)
C2CBJG000409(100P)
MN6627931BL(80P)



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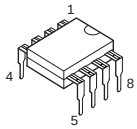

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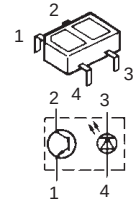

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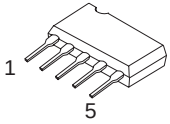
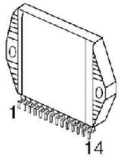


RSN314H41A-P



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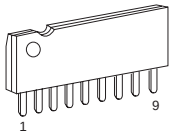

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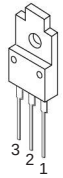

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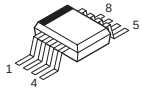

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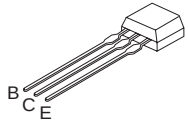

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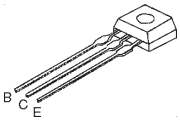
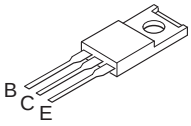


KTA1046
KTC2026



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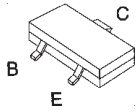

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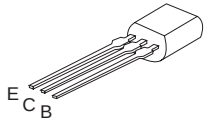

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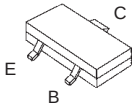

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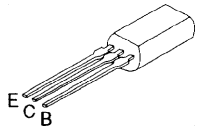

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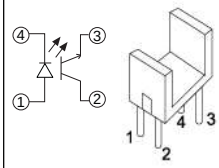

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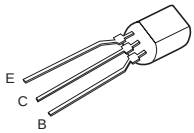

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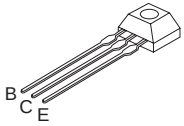

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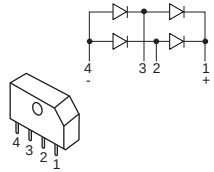

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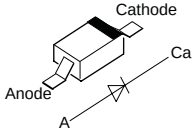

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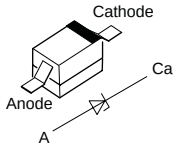

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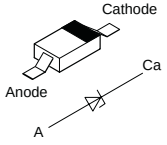

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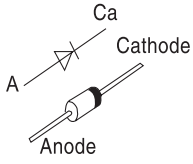

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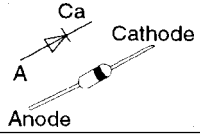

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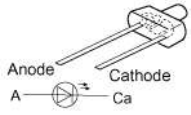

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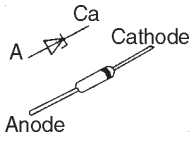


22 Terminal Function of IC ’ s

22.1 IC701 (AN22004A-NF) IC HEAD AMP

Pin No.	Mark	I/O	Function
1	LPD	I	APC Amp input terminal
2	LD	O	APC Amp. output terminal
3	VCC	I	Power source terminal
4	EQSW	-	Equalizer switch terminal
5	RFOUT	O	RF summing Amp output terminal
6	RFIN	I	AGC input terminal
7	CAGC	-	AGC loop filter connecting capacitor terminal
8	AGC	O	AGC output terminal
9	HPF-AMP	-	HPF Amp connecting capacitor terminal
10	3TOUT	O	3TOUT output terminal
11	HPFDET	-	Detection system’s HPF connecting capacitor terminal
12	OFT CONT	-	PFTR detection level adjustment terminal
13	BDO	O	BDO output terminal
14	OFTR	O	OFTR output terminal
15	/RFDET	O	NRFDET output terminal
16	LDON	-	LDON terminal
17	GND	-	Earth terminal
18	EQBSY	-	Equalizer boost adjustment terminal
19	VREF	O	VREF output terminal
20	TEN	I	Amp inverting input terminal
21	TEOUT	O	TE amp output terminal
22	FEN	I	Amp inverting input terminal
23	FEOUT	O	FE amp output terminal
24	GCTL	-	GCTL terminal
25	FBAL	I	FBAL control terminal
26	TBAL	I	TBAL control terminal
27	E	O	Tracking signal input terminal 1
28	F	O	Tracking signal input terminal 2
29	D	O	Tracking signal input terminal 4
30	B	O	Tracking signal input terminal 2
31	C	O	Tracking signal input terminal 3
32	A	O	Tracking signal input terminal 1

22.2 IC702 (MN6627931BL) IC LSI

Pin No.	Mark	I/O	Function
1	DRVDD	I	DRAM interface power supply
2	D0	I/O	DRAM data input-output 0
3	D1	I/O	DRAM data input-output 1
4	NWE	O	DRAM ROM enable signal
5	NRAS	O	DRAM RAS control signal

6	D2	I/O	DRAM data input-output 2
7	D3	I/O	DRAM data input-output 3
8	NCAS0	O	DRAM CAS control 0
9	NCASI	O	DRAM CAS control 1
10	A8	O	DRAM Address 8
11	A7	O	DRAM Address 7
12	A6	O	DRAM Address 6
13	A5	O	DRAM Address 5
14	A4	O	DRAM Address 4
15	A9	O	DRAM Address 9
16	A0	O	DRAM Address 0
17	A1	O	DRAM Address 1
18	A2	O	DRAM Address 2
19	A3	O	DRAM Address 3
20	DVSS2	-	Digital GND
21	DVDD2	-	Digital power supply
22	SPOUT	O	Spindle motor drive output signal (absolute value output)
23	TRVP	O	Traverse drive output (+output)
24	TRVM	O	Traverse drive output (-output)
25	TRP	O	Tracking drive output (+output)
26	TRM	O	Tracking drive output (-output)
27	FOP	O	Focus drive output (+output)
28	FOM	O	Focus drive output (-output)
29	IOVDD1	-	IO power supply
30	TBAL	O	Tracking balance adjustment output
31	FBAL	O	Focus balance adjustment output
32	FE	I	Focus error signal input (analog input)
33	TE	I	Tracking error signal input (analog input)
34	RFENV	I	RF envelope signal input (analog input)
35	OFT	I	Off track signal input (H: off track)
36	NRFDET	I	RF detective signal input (L: detection)
37	BDO	I	Drop out signal input (H: drop out)
38	LDON	O	Laser ON signal input (H: ON)
39	ARF	I	RF signal input
40	IREF	I/O	Resistance terminal for current electricity setting
41	ADP VCC	I	Analog power supply voltage monitor input
42	DSLF	I/O	DSL loop filter terminal
43	RFSW	I/O	DSL loop filter terminal
44	PLLF	I/O	PLL loop filter terminal (phase comparison)
45	PLLF0	I/O	PLL loop filter terminal (speed comparison)
46	AVDD2	I	”Analog power supply (DSL
47	AVSS2	-	”Analog ground (DSL
48	OUTL	O	L ch audio output
49	AVSS1	-	Analog ground (audio output)
50	OUTR	O	R ch audio output
51	AVDD1	-	Analog power supply (audio output)
52	DVSS3	-	Digital GND
53	DVDD3	-	Digital power supply
54	IOVDD2	-	IO power supply
55	FLAG	O	Flag output
56	EXT2	I/O	Extension input-output port 2
57	EXT0	I/O	Extension input-output port 0
58	EXT1	I/O	Extension input-output port 1

59	REGON	I	”In-housed regulator control (H: ON
60	TX	O	Digital audio interface output
61	MCLK	I	Micon command clock input
62	MDATA	I	Micon command data input
63	MLD	I	Micon command load input (L: Load)
64	BLKCK	O	Sub code block clock (f-75Hz: normal play)
65	PWM SEL	I	”PWM output mode switch input (L: direct
66	SMCK	O	4.2336MHz/8.4672MHz clock output
67	SBCK	I/O	Sub code serial output clock input
68	STAT	O	Status output
69	NRST	I	Reset input (L: reset)
70	SPPOL	O	Spindle motor drive output signal (polarity output)
71	PMCK	O	88.2kHz clock output
72	DQSY	O	CD TEXT data back output
73	TXTD	O	CD TEXT data output
74	TXTCK	I/O	CD TEXT resister outer clock input
75	NTEST	I	Test input (H: normal)
76	OUT X2	O	Oscillator output
77	IN X1	I	Oscillator input
78	DVSS1	-	Digital GND
79	DVDD1	I	Digital power supply
80	MON	I/O	Monitor terminal

22.3 IC703 (BA5948FPE2) IC 4CH DRIVE

Pin No.	Mark	I/O	Function
1	IN2	I	Motor Driver 92 Input
2	PC2	I	Turntable Motor Drive Signal (“L”:ON)
3	IN1	I	Motor Driver (1) Input
4	PC1	-	Traverse Motor Drive Signal (“L”:ON)
5	N.C.	-	No Connection
6	N.C.	-	No Connection
7	N.C.	-	No Connection
8	N.C.	-	No Connection
9	PGND1	-	Ground Connection (1) for Driver
10	PVCC1	I	Power Supply (1) for Driver
11	D1-	O	Motor Driver (1) reverse - action output
12	D1+	O	Motor Driver (1) forward - action output
13	D2-	O	Motor Driver (2) reverse - action output
14	D2+	O	Motor Driver (1) forward - action output
15	D3-	O	Motor Driver (3) reverse - action output
16	D3+	O	Motor Driver (3) forward - action output
17	D4-	O	Motor Driver (4) reverse - action output
18	D4+	O	Motor Driver (4) forward - action output
19	PVCC2	-	Power Supply (2) for Driver
20	PGND2	-	Ground Connection (2) for Driver
21	N.C.	-	No Connection
22	N.C.	-	No Connection
23	N.C.	-	No Connection
24	N.C.	-	No Connection
25	VCC	I	Power Supply Terminal

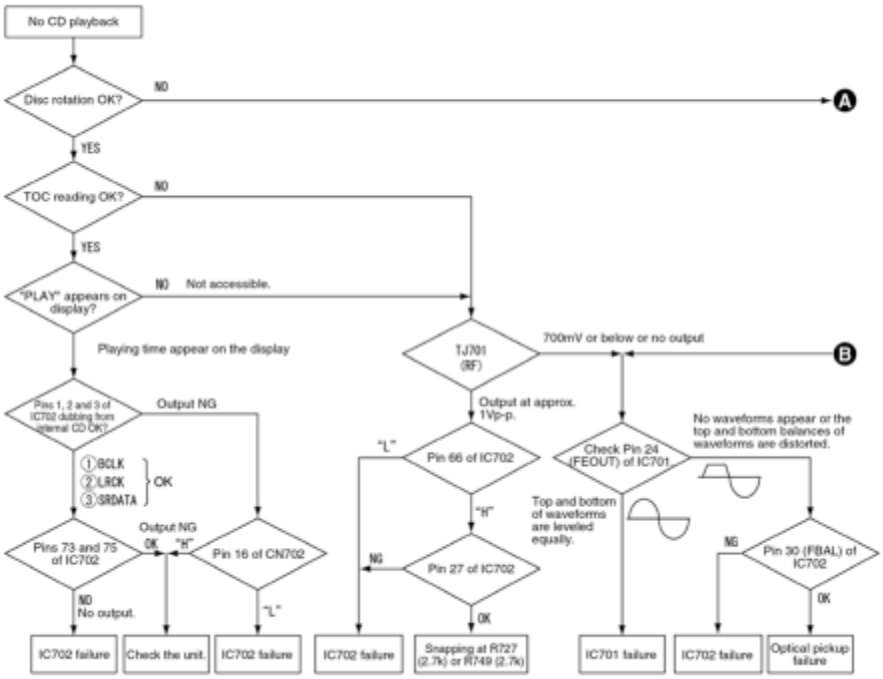
26	VREF	I	Reference Voltage Input
27	IN4	I	Motor Driver (4) Input
28	IN3	I	Motor Driver (3) Input

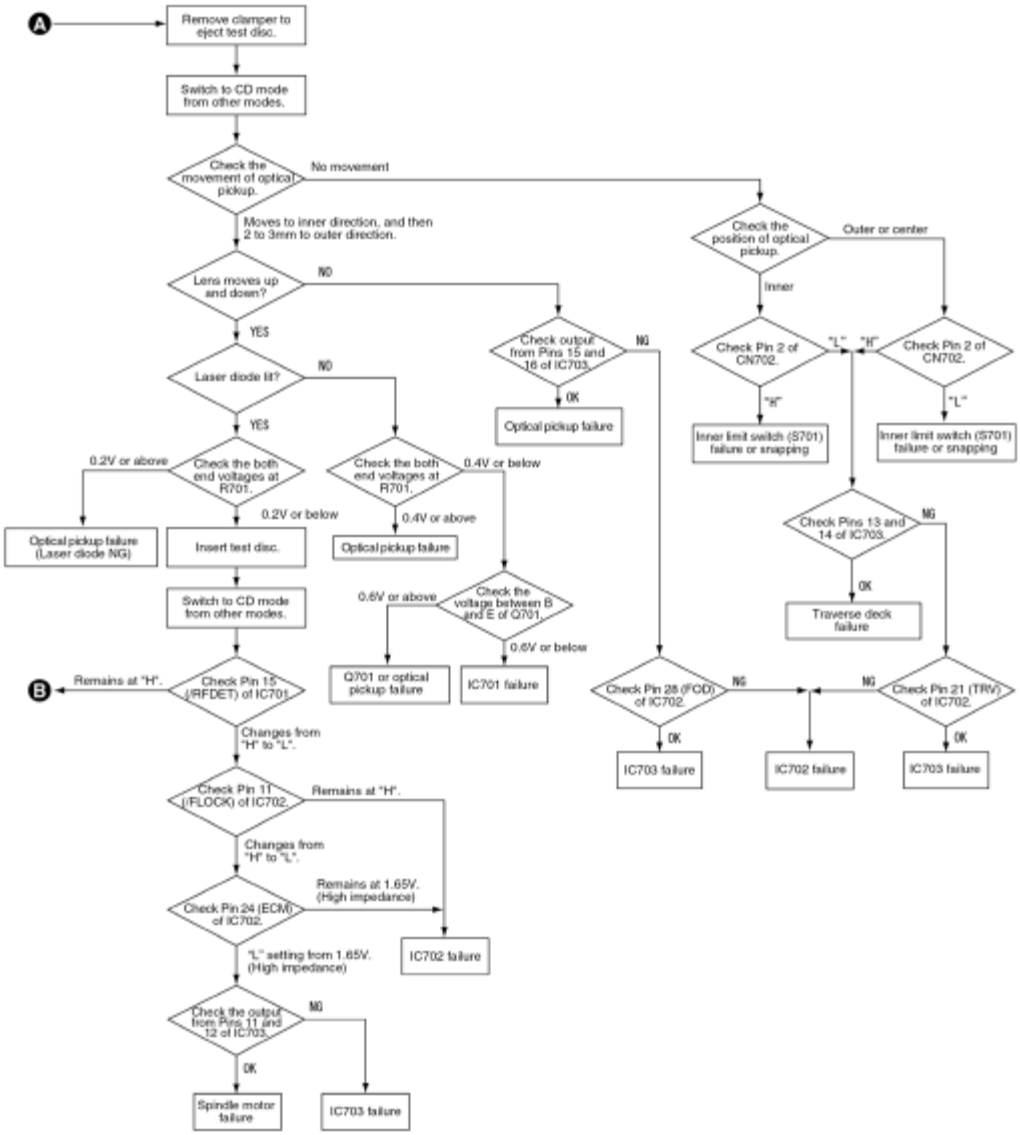
22.4 IC302 (C2CBJG000453) MICRO PROCESSOR

Pin No.	Mark	I/O	Function
1	CH_SW	I	Change Switch (CR16)
2	TU_TUNED	I	Tuner tuned signal
3	TU_ST	I	Tuner Stereo signal
4	TU_CK	I	Tuner Serial Clock Input
5	TU_SDA	I	Tuner Serial Data Input
6	MBP1	O	Microcomputer Beat Proof Output 1 (CONTROL)
7	MBP2	O	Microcomputer Beat Proof Output 2 (CONTROL)
8	BYTE	-	External Data Bus Width Select Input (Connect To Ground)
9	CNVSS	-	Flash Mode Terminal (Connect To Ground)
10	XCIN	-	32.768 kHz Sub Clock
11	XCOUT	-	32.768 kHz Sub Clock
12	/RESET	-	Reset Input (ACTIVEL)
13	XOUT	-	10 MHz Main Clock
14	VSS	-	Ground (0V)
15	XIN	-	10 MHz Main Clock
16	VCC	-	Power Sipply (+5V)
17	/NMI	-	Connect to Vcc (+5V)
18	RMT	I	Remote Control Input
19	BLKCK	I	CD Block Clock Input (Inverted)
20	SYNC	I	AC Failure Detect Input
21	MUTE_H	O	HIC Mute
22	EE_CS/	O	EEPROM Chip Select
23	EE_CLK	O	EEPROM CLOCK
24	MUTE_T	O	H=Tuner muting
25	MUTE_X	O	A=AUX muting
26	FL_CS1	O	FL Driver Chip Select (Master)
27	FL_CS2	O	FL Driver Chip Select (PM 29 ONLY)
28	FL_CLK	O	Serial Clock to FL Driver
29	/FL_RESET	O	Reset Input (ACTIVEL)
30	FL_DOUT	O	Sarial Data To FL Driver (Output)
31	RXD	-	N.C
32	TXD	-	N.C
33	SCLK	-	N.C
34	BUSY	-	N.C
35	MEM_SI	O	Flash Memory Serial Input
36	MEM_SO	I	Flash Memory Serial Output
37	MEM_CK	O	Flash Memory Serial Clock
38	MEM_CS	O	Flash Memory Chip Select
39	MCLK	O	CD Command CLK Output
40	MUTE_A	O	Audio Mute
41	EPM	O	-
42	MDATA	O	CD Command Data Output
43	MLD	O	CD Command Load Output/
44	RDS_CLK	I	RDS Clock Input
45	RDS_DAT	I	RDS Data Input
46	CE	-	-
47	DCDET	I	DC Detect Input

48	STATUS	I	CD Servo LSI Status Input (Inverted)
49	PCONT	O	Main Transformer Control Output
50	PLAY_SW	I	Play Switch (CR16)
51	ST_SW	I	Stock Switch (CR16)
52	OP_SW	I	Open Switch (CR16)
53	POS	I	Position Switch (CR16)
54	BT_SW	I	Bottom Switch (CR16)
55	M1_R	O	Changer Motor 1 Reverse Control
56	M1_F	O	Changer Motor 1 Forward Control
57	M2_R	O	Changer Motor 2 Reverse Control
58	M2_F	O	Changer Motor 2 Forward Control
59	REC	O	when record circuit is operating DURING RECORDING=H
60	KEY_LED	O	Dimmer ON=L, Dimmer Off=H-
61	PHOTO	I	PHOTO (SG Mechanism only)
62	VCC	-	Power Supply (+5V)
63	EE_DAT	I/O	EE_DAT
64	VSS	-	Ground (0V)
65	DMT	O	Deck Mute at mecha transition L=mute OFF, H=mute ON
66	BP1	O	AM beatproof 1 output L=BP1, H=BP2
67	ASP_CLK	O	ASP CLK
68	ASP_DAT	O	ASP DATA
69	N.C.	-	No Connection
70	N.C.	-	No Connection
71	N.C.	-	No Connection
72	N.C.	-	No Connection
73	N.C.	-	No Connection
74	N.C.	-	No Connection
75	MEM_RST	O	Flash memory reset
76	MEM_WP	O	Flash Memory Write Protect
77	JOG1	I	JOG SEARCH 1
78	JOG2	I	JOG SEARCH 2
79	/CD	O	CD POWER CONTROL (Active Low)
80	CD_RST	O	CD Reset Output
81	N.C.	-	No Connection
82	/RESTSW	I	CD Limit Switch Input for the Most Inner Point (Active Low)
83	N.C.	-	No Connection
84	N.C.	-	No Connection
85	SSEQ_LED	O	Super Sound EQ LED Control
86	RE_LED	O	MP3/WMA Re-master Control
87	MOTOR	O	MOTOR Control Output L=OFF, H=ON
88	PLUNGER	O	Deck PLUNGER Control Output L=OFF, H=ON
89	DECK_AD1	I	DECK AD Input 1
90	DECK_AD2	I	DECK AD Input 2
91	REG1	I	Region Setting 1
92	KEY3	I	KEY3 INPUT
93	KEY2	I	KEY2 INPUT
94	KEY1	I	KEY1 INPUT
95	VOL_JOG1	I	Volume Jog 1
96	AVSS	-	Analog Power Supply Input (Connect to GND)
97	N.C.	-	No Connection
98	VREF	-	Reference for A-D (5V)
99	AVCC	-	Analog Power Supply Input
100	N.C.	-	No Connection

23 Troubleshooting Flowchart (CD Section Circuit)




A
Remove clamper to eject test disc.
Switch to CD mode from other modes.
Check the movement of optical pickup.
No movement
Moves to inner direction, and then 2 to 3mm to outer direction.
Lens moves up and down?
NO
YES
Laser diode lit?
NO
YES
Check the both end voltages at R701.
0.2V or above
0.2V or below
Optical pickup failure (Laser diode NG)
Insert test disc.
Switch to CD mode from other modes.
B
Remains at "H".
Check Pin 15 (RFDET) of IC701.
Changes from "H" to "L".
Check Pin 11 (FLOCK) of IC702.
Remains at "H".
IC702 failure
Changes from "H" to "L".
Check Pin 24 (ECM) of IC702.
Remains at 1.65V. (High impedance)
"L" setting from 1.65V. (High impedance)
Check the output from Pins 11 and 12 of IC703.
NG
OK
Spindle motor failure
IC703 failure
Check the both end voltages at R701.
0.4V or below
0.4V or above
Optical pickup failure
Check the voltage between B and E of Q701.
0.6V or above
0.6V or below
Q701 or optical pickup failure
IC701 failure
Check output from Pins 15 and 16 of IC703.
NG
OK
Optical pickup failure
Check the position of optical pickup.
Outer or center
Inner
Check Pin 2 of CN702.
"L"
"H"
Check Pin 2 of CN702.
"H"
Inner limit switch (S701) failure or snapping
"L"
Inner limit switch (S701) failure or snapping
Check Pins 13 and 14 of IC703.
NG
OK
Traverse deck failure
Check Pin 28 (FCD) of IC702.
NG
OK
IC703 failure
NG
IC702 failure
Check Pin 21 (TRV) of IC702.
OK
IC703 failure

24 Parts Location and Replacement Parts List

Notes:

- Important safety notice:

  Components identified by ⚠ mark have special characteristics important for safety.
  Furthermore, special parts which have purposes of fire-retardent (resistors), high-quality sound (capacitors), low noise (resistors), etc are used.
  When replacing any of these components, be sure to use only manufacturer's specified parts shown in the parts list.
- The parenthesized indications in the Remarks columns specify the areas or colour. (Refer to the cover page for area or colour)

  Parts without these indications can be used for all areas.
- Warning: This product uses a laser diode. Refer to Precaution of Laser Diode.
- Capacitor values are in microfarads (μF) unless specified otherwise, P= Pico-farads (pF), F= Farads.
- Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM).
- The marking (RTL) indicates that the Retention Time is limited for this items. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of a availabilityis dependent on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will no longer be available.
- [M] Indicates in the Remarks columns indicates parts supplied by **PAVCSG.**
- The "(SF)" mark denotes the standard part.
- Reference for O/I book languages are as follows:

Ar:	Arabic	Du:	Dutch	It: Italian	Sp: Spanish
Cf:	Canadian French	En:	English	Ko: Korean	Sw: Swedish
Cz:	Czech	Fr:	French	Po: Polish	Co: Traditional Chinese
Da:	Danish	Ge:	German	Ru: Russian	Cn: Simplified Chinese
Pe:	Persian				

24.1 Deck Mechanism

24.1.1 Deck Mechanism Parts Location (RAA4402-S)

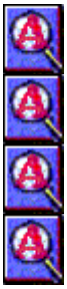
24.1.2 Deck Mechanism Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		CASSETTE DECK	
101	RED0067	R/P HEAD BLOCK UNIT	[M]
103	RDG0300	REEL BASE GEAR	[M]
104	RDG0301	WINDING RELAY GEAR	[M]
105	RDK0026	MAIN GEAR	[M]
107	RDV0033-4	WINDING BELT	[M]
108	RDV0064	CAPSTAN BELT	[M]
110	RMB0312	TRIGGER LEVER SPRING	[M]
111	RMB0400	REEL SPRING	[M]
112	RMB0403	HEAB PANEL SPRING	[M]

113	RMB0404	BRAKE ROD SPRING	[M]
114	RMB0406	FR LEVER SPRING	[M]
115	RMB0408	THRUST SPRING	[M]
116	RML0370	TRIGGER LEVER	[M]
117	RML0371	FR LEVER	[M]
118	RML0372	WINDING LEVER	[M]
119	RML0374	EJECT LEVER	[M]
120	RMM0131	BRAKE ROD	[M]
121	RMM0133	EJECT ROD	[M]
122	RMQ0519	REEL HUB	[M]
123	RMS0398-1	MOVING CORE	[M]
124	RXQ0470	PLUNGER	[M]
125	RMC0061	PACK SPRING	[M]
126	RXF0061	FLYWHEEL F ASSY	[M]
128	RXG0040	FF RELAY GEAR ASSY	[M]
129	RMK0283A-J	SUB-CHASSIS	[M]
130	RXL0124	PINCH ROLLER F ASSY	[M]
130-1	RMB0401	PINCH ARM SPRING F	[M]
132	RXL0126	WINDING ARM ASSY	[M]
133	RXQ0412	HEAD PANEL ASSY	[M]
133-1	RMB0405	FR ROD SPRING	[M]
133-2	RMM0132	FR ROD	[M]
134	REM0098	CAP MOTOR ASS'Y	[M]
135	RHD26022	MOTOR SCREW	[M]
136	XTW2+5L	HEAD BLOCK UNIT SCREW	[M]
137	XTW26+10S	SUB-CHASSIS SCREW	[M]
138	XYC2+JF17	PCB EARTH SCREW	[M]
139	RFKJSTR280PP	CHASSIS ASS'Y	[M]

24.2 CD LOading Mechanisms

24.2.1 CD LOading Mechanism Parts Location



24.2.2 CD LOading Mechanism Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		TRAVERSE DECK	
301	RAE0157A-V	TRV UNIT WITHOUT SER	[M]
303	RDG0455	TRV GEAR (A)	[M]
304	RDG0456	TRV GEAR (B)	[M]
305	RDG0519	MAIN GEAR	[M]
306	RDG0520	SPEED UP GEAR	[M]
307	RDG0521	REVERSE GEAR	[M]
308	RDG0522	GENEVA GEAR	[M]

309	RDG0523	HOR RELAY GEAR	[M]
310	RDG0525	CROWN GEAR	[M]
311	RDG0526	TRAY RELAY GEAR	[M]
312	RDG0527	UD PULLEY GEAR	[M]
313	RDG0528	HOR SPEED DOWN GEAR	[M]
314	RDG0529	HOR SPEED DOWN GEAR	[M]
315	RDG0530	HOR DRIVE GEAR	[M]
316	RDG0531	LOAD RELAY GEAR	[M]
317	RDG0532	LOAD GEAR	[M]
318	RDG0535	UD SPEED DOWN GEAR	[M]
319	RDG0534	UD SPEED DOWN GEAR	[M]
320	RDG0536	SELECT SPEED DOWN GEAR	[M]
321	RDG0537	SELECT DRIVE GEAR	[M]
322	RDG0538	CHANGE GEAR	[M]
323	RDG0539	UD DRIVE GEAR	[M]
324	RDG0540	TIMING GEAR	[M]
325	RDG0542	TRAY GEAR	[M]
326	RDG0543	HOR PULLEY GEAR	[M]
327	RDV0068	HOR BELT	[M]
328	RDV0069	UD BELT	[M]
329	RHM0001	MAGNET	[M]
330	RME0109	FLOATING SPRING	[M]
331	RFKNCT101	TRAVERSE UNIT ASS'Y	[M]
331-1	RME0369	PRESS SPRING	[M]
331-2	RXQ0632	TRV MOTOR UNIT	[M]
331-3	XQN17+C28F	SCREW	[M]
332	RME0344	UD ASSIST SPRING	[M]
333	RME0361	TRAY STOPPER SPRING	[M]
334	RME0363	LIMIT SPRING	[M]
335	RME0368	MAIN GEAR SPRING	[M]
336	RMG0563-T	FLOATING RUBBER	[M]
337	RML0616	SPEED UP LOCK	[M]
338	RML0617	SEPARATE LEVER 1	[M]
339	RML0618	SEPARATE LEVER 2	[M]
340	RML0619-1	UD. CONNECTION LEVER	[M]
341	RML0620	TRV.CONNECT LEVER	[M]
342	RML0621	TRAY CHG. LEVER	[M]
343	RML0622	TRAY LOCK LEVER	[M]
344	RML0623	OPEN SW. LEVER	[M]
345	RML0624	CHG. LEVER	[M]
346	RML0637	TRAY STOPPER	[M]
347	RMM0218	TRV DRIVE RACK	[M]
348	RMM0239	UD.RACK [L]	[M]
349	RMM0240	UD.RACK [R]	[M]
350	RMM0241	TRV.SLIDE PLATE [L]	[M]
351	RMM0242	TRV.SLIDE PLATE [R]	[M]
352	RMM0243	SELECT RACK	[M]
353	RMM0244	SELECT GUIDE	[M]
354	RMQ1051	PITCH PLATE	[M]
355	RMQ1052	UD BASE	[M]
356	RMQ1056	TRAY GUIDE [L]	[M]
357	RMQ1057	TRAY GUIDE [R]	[M]
358	RMQ1058	GEAR HOLDER	[M]
359	RMQ1059	TOP COVER	[M]
360	RMQ1060	CLAMP GUIDE	[M]

361	RMQ1061	TG.PLATE	[M]
362	RMR0334	FIXTURE	[M]
363	RMR0624-W5	CLAMPER	[M]
364	RMR1407A-H1	TRAY NO. 1	[M]
365	RMR1407B-H1	TRAY NO. 2	[M]
366	RMR1407C-H1	TRAY NO. 3	[M]
367	RMR1407D-H1	TRAY NO. 4	[M]
368	RMR1407E-H1	TRAY NO. 5	[M]
369	RFKNAPM77MDS	MECHA BASE ASS'Y	[M]
370	RMR1427-X	MIDDLE CHASSIS	[M]
371	RMS0757-1	FIXED PIN	[M]
375	RMS0762	TRAY GEAR SHAFT	[M]
376	RXG0053	TRAY DRIVE GEAR ASSY	[M]
377	RXQ0999	OPU UNIT	[M]
378	RXQ0803	LOADING MOTOR ASS'Y	[M]
379	RXQ0804	UD MOTOR ASS'Y	[M]
380	XTB3+10J	SCREW	[M]
381	XTN2+6G	SCREW	[M]
382	RMC0472	TRAY SPRING	[M]
383	XTBS26+8J	SCREW	[M]

24.3 Cabinet Part List

24.3.1 Cabinet Parts Location

24.3.2 Cabinet Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS	
1	REEV0026	21P FFC	[M]
2	REEV0027	26P FFC (PANEL-MAIN)	[M]
3	REEV0039	17P FFC (CR16-MAIN)	[M]
4	REEX0166	14P FFC WIRE	[M]
5	REM0094A	COOLING FAN	[M]
6	RGK1750-S	VOLUME RING	[M]
7	RYPV0034A-S	FRONT PANEL UNIT	[M]
7-1	RYQV0014A-S	CD LID UNIT	[M]
7-2	RYQV0015-S	BUTTON UNIT	[M]
7-3	RHGV0008	LEG CUSHION	[M]
7-4	RGUV0063-S	CD/MAIN SELECTION BT	[M]
7-5	RGK1756-A	M/FUNCTION BTN ORN.	[M]
8	RGL0660-Q1	VOLUME RING LIGHT	[M]
9	RFKHAPM29PCS	REAR PANEL ASS'Y	[M]PC
9	RFKHAPM29P-S	REAR PANEL ASS'Y	[M]P
10	RGU2280-S	CASS EJECT BUTTON	[M]
11	RGW0406-S	VOLUME KNOB	[M]
12	RHD30007-K1	SCREW	[M]

13	RKF0688-S	CASS LID	[M]
14	RKM0502A-K	SIDE PANEL LEFT	[M]
15	RKM0503A-K	SIDE PANEL RIGHT	[M]
16	RKM0504A-S	TOP CABINET	[M]
17	RMB0448-J	LOCK ROD SPRING	[M]
18	RMK0595	BOTTOM CHASSIS	[M]
19	RMKX0090	INNER CHASSIS	[M]
20	RMM0163-1	CASS LOCK ROD	[M]
21	RMN0780	CD LID SUPPORT	[M]
22	RMN0778	MD HOLDER	[M]
23	RMNV0015	FL HOLDER	[M]
24	RMN0779	LED HOLDER	[M]
25	RMN0789	FUNCTION LED CASE	[M]
26	RMQ1294	JOG BASE B	[M]
27	RMR1619-W	DIFFUSER CASE	[M]
28	RMY0260	HEAT SINK	[M]
29	RSC0725	EARTH PLATE	[M]
30	RSCV0018	FL REAR SHIELD	[M]
31	RSCV0019	REAR SHIELD PLATE	[M]
32	RUS757ZAA	CASS HALF SPRING	[M]
33	RXGX0003	DAMPER GEAR	[M]
34	RXXX0043	HEAT SINK UNIT	[M]
35	RYQ0488-S	JOG UNIT	[M]
36	XTB3+10JFZ	SCREW	[M]
37	XTB3+8JFZ	SCREW	[M]
38	XTBS26+10J	SCREW	[M]
39	XTV3+10G	SCREW	[M]
40	XTW3+15T	SCREW	[M]
41	XTWS26+10Q	SCREW	[M]
42	XTWS3+6T	SCREW	[M]
43	RMB0782	EARTH SPRING	[M]
44	RMB0780	CASS OPEN SPRING	[M]

24.4 Electrical Part List

Ref. No.	Part No.	Part Name & Description	Remarks
		PRINTED CIRCUIT BOARD	
	REPX0363A	CD SERVO P.C.B.	[M] (RTL)
	REPV0019B	MAIN P.C.B. / PANEL P.C.B. / TACT SWITCH P.C.B. / SWITCH P.C.B. / HEADPHONE P.C.B. / SPEAKER TERMINAL P.C.B.	[M] (RTL)
	REPV0016B	DECK P.C.B. / TAPE EJECT P.C.B.	[M] (RTL)
	REPX0321H	DECK MECHANISM P.C.B.	[M] (RTL)
	REP3569A	CD LOADING P.C.B.	[M] (RTL)
	REPV0018K	POWER P.C.B. / TRANSFORMER P.C.B.	[M] (RTL)
		INTEGRATED CIRCUITS	
IC11	C0GAG0000007	IC DRIVER	[M]
IC21	C0GAG0000007	IC DRIVER	[M]
IC300	C1BB00000757	IC ASP	[M]
IC301	C3FBHA000004	IC FLASH MEMORY	[M]
IC302	C2CBJG000453	MICRO-PROCESSOR IC	[M]

IC500	RSN314H41A-P	IC POWER AMP HIC	[M]
IC501	C0AABB000125	IC OP AMP	[M]
IC503	C0CAABE00006	IC 3.3V REGULATOR	[M]
IC601	C0HBB0000039	IC FL DRIVER	[M]
IC602	C0HBB0000039	IC FL DRIVER	[M]
IC701	AN22004A-NF	IC HEAD AMP	[M]
IC702	MN6627931BL	IC LSI	[M]
IC703	BA5948FPE2	IC 4 CH DRIVE	[M]
IC704	C3ABMB000043	IC 16M DRAM	[M]
IC971	CNB13030R2AU	IC PHOTO INTERUPTOR	[M]
IC1000	C1AA00000612	IC ANALOG SW	[M]
IC1001	AN7326K	IC DECK R/P	[M]
		TRANSISTORS	
Q1	B3NAA0000068	TRANSISTOR	[M]
Q200	KRA102STA	TRANSISTOR	[M]
Q201	KTC3875GRTA	TRANSISTOR	[M]
Q222	KTC3875GRTA	TRANSISTOR	[M]
Q223	KTC3875GRTA	TRANSISTOR	[M]
Q224	KTC3875GRTA	TRANSISTOR	[M]
Q301	KTA1504GRTA	TRANSISTOR	[M]
Q302	KRC102STA	TRANSISTOR	[M]
Q303	KTA1504GRTA	TRANSISTOR	[M]
Q304	B1GBCFGG0001	TRANSISTOR	[M]
Q305	B1GBCFGG0001	TRANSISTOR	[M]
Q306	KRC103STA	TRANSISTOR	[M]
Q307	KTC3875GRTA	TRANSISTOR	[M]
Q308	KTC3875GRTA	TRANSISTOR	[M]
Q309	KRC101STA	TRANSISTOR	[M]
Q310	KRC101STA	TRANSISTOR	[M]
Q390	B1GBCFGG0001	TRANSISTOR	[M]
Q400	KRA102STA	TRANSISTOR	[M]
Q422	KTC3875GRTA	TRANSISTOR	[M]
Q423	KTC3875GRTA	TRANSISTOR	[M]
Q424	KTC3875GRTA	TRANSISTOR	[M]
Q501	KTC2026	TRANSISTOR	[M]
Q502	KTA1046	TRANSISTOR	[M]
Q505	KTA1267GRTA	TRANSISTOR	[M]
Q506	KTA1046	TRANSISTOR	[M]
Q508	KTC3199GRTA	TRANSISTOR	[M]
Q509	KRA110MTA	TRANSISTOR	[M]
Q514	2SD0592ARA	TRANSISTOR	[M]
Q515	KTC3199GRTA	TRANSISTOR	[M]
Q516	KTC3199GRTA	TRANSISTOR	[M]
Q517	KTC32030YTA	TRANSISTOR	[M]
Q519	B1AAGC000006	TRANSISTOR	[M]
Q520	KTC2026	TRANSISTOR	[M]
Q575	B1AAGC000006	TRANSISTOR	[M]
Q577	2SC3940ARA	TRANSISTOR	[M]
Q578	KRC102MTA	TRANSISTOR	[M]
Q579	2SB0621AHA	TRANSISTOR	[M]
Q600	KRC119STA	TRANSISTOR	[M]
Q601	KRC119STA	TRANSISTOR	[M]
Q602	KRC119STA	TRANSISTOR	[M]
Q603	KRC119STA	TRANSISTOR	[M]
Q604	KTC3875GRTA	TRANSISTOR	[M]

Q700	B1AACF000063	TRANSISTOR	[M]
Q701	2SA1037AKSTX	TRANSISTOR	[M]
Q701	KTA12710YTA	TRANSISTOR	[M]
Q702	B1AACF000063	TRANSISTOR	[M]
Q703	B1AACF000063	TRANSISTOR	[M]
Q704	KRA102MTA	TRANSISTOR	[M]
Q710	B1AAGC000006	TRANSISTOR	[M]
Q711	B1AAGC000006	TRANSISTOR	[M]
Q714	KTC3199GRTA	TRANSISTOR	[M]
Q715	KTC3199GRTA	TRANSISTOR	[M]
Q716	KTC3199GRTA	TRANSISTOR	[M]
Q717	KTC3199GRTA	TRANSISTOR	[M]
Q718	B1AAGC000006	TRANSISTOR	[M]
Q719	B1AAGC000006	TRANSISTOR	[M]
Q720	KTC3199GRTA	TRANSISTOR	[M]
Q721	KTC3199GRTA	TRANSISTOR	[M]
Q722	KRA110MTA	TRANSISTOR	[M]
Q723	KTA12710YTA	TRANSISTOR	[M]
Q724	KTC3199GRTA	TRANSISTOR	[M]
Q725	B1AAGC000006	TRANSISTOR	[M]
Q726	B1AAGC000006	TRANSISTOR	[M]
Q1101	B1ABGC000005	TRANSISTOR	[M]
Q1201	B1ABGC000005	TRANSISTOR	[M]
Q1302	B1GDCFJJ0002	TRANSISTOR	[M]
Q1303	B1GBCFGH0001	TRANSISTOR	[M]
Q1304	B1GDCFGH0002	TRANSISTOR	[M]
Q1309	B1AAGC000006	TRANSISTOR	[M]
Q1310	B1AAGC000006	TRANSISTOR	[M]
Q1312	B1ABCF000011	TRANSISTOR	[M]
Q1314	B1GDCFGH0002	TRANSISTOR	[M]
Q1315	KTA12710YTA	TRANSISTOR	[M]
Q1316	2SD09650RA	TRANSISTOR	[M]
Q1317	B1ABGC000005	TRANSISTOR	[M]
		DIODES	
D201	B0BC01000014	DIODE	[M]
D302	1SS380TE-17	DIODE	[M]
D303	1SS380TE-17	DIODE	[M]
D304	MA729TX	DIODE	[M]
D305	B0ACCK000005	DIODE	[M]
D306	1SS380TE-17	DIODE	[M]
D307	1SS380TE-17	DIODE	[M]
D308	1SS380TE-17	DIODE	[M]
D500	B0EBNL000004	DIODE	[M]
D505	B0AACK000004	DIODE	[M]
D508	MTZJ15BTA	DIODE	[M]
D515	B0BA9R600002	DIODE	[M]
D517	B0BA5R600016	DIODE	[M]
D520	B0BA9R600002	DIODE	[M]
D524	B0BA01100004	DIODE	[M]
D525	B0AACK000004	DIODE	[M]
D526	B0AACK000004	DIODE	[M]
D527	B0AACK000004	DIODE	[M]
D530	B0AACK000004	DIODE	[M]
D531	B0BA8R200005	DIODE	[M]
D578	B0EAKM000117	DIODE	[M]

D579	B0EAKM000117	DIODE	[M]
D580	B0EAKM000117	DIODE	[M]
D581	B0EAKM000117	DIODE	[M]
D582	B0BA6R600008	DIODE	[M]
D584	B0EAKM000117	DIODE	[M]
D585	B0EAKM000117	DIODE	[M]
D586	B0EAKM000117	DIODE	[M]
D587	B0EAKM000117	DIODE	[M]
D588	B0EAKM000117	DIODE	[M]
D589	B0EAKM000117	DIODE	[M]
D592	B0EAKM000117	DIODE	[M]
D593	B0EAKM000117	DIODE	[M]
D595	B0BA03100016	DIODE	[M]
D600	UDZSTE176R8B	DIODE	[M]
D601	LNJ801TPSJA	DIODE	[M]
D602	LNJ801TPSJA	DIODE	[M]
D609	SLI325URCT31	DIODE	[M]
D612	B3AEA0000041	DIODE	[M]
D613	UDZSTE178R2B	DIODE	[M]
D614	B3AEA0000041	DIODE	[M]
D615	UDZSTE178R2B	DIODE	[M]
D700	B0AACK000004	DIODE	[M]
D701	B0AACK000004	DIODE	[M]
D702	B0AACK000004	DIODE	[M]
D703	B0AACK000004	DIODE	[M]
D704	B0AACK000004	DIODE	[M]
D705	B0AACK000004	DIODE	[M]
D706	B0AACK000004	DIODE	[M]
D707	B0AACK000004	DIODE	[M]
D708	MA2C16500E	DIODE	[M]
D709	MA2C16500E	DIODE	[M]
D750	MAZ80560ML	DIODE	[M]
D971	MA2C16500E	DIODE	[M]
D1301	B0ACCK000005	DIODE	[M]
		VARIABLE RESISTORS	
VR600	EVEJ1F42124B	ENCODER	[M]
VR601	K9AA012A0005	ROTARY ENCODER	[M]
		SWITCHES	
S1	K0L1BA000065	SW STOCK	[M]
S2	K0L1BA000065	SW PLAY	[M]
S3	K0L1BA000078	SW BOTTOM	[M]
S4	RSH1A045-1A	SW OPEN	[M]
S5	K0L1BA000065	SW CHANGE	[M]
S601	EVQ21405RJ	SW CD 1	[M]
S602	EVQ21405RJ	SW CD 2	[M]
S603	EVQ21405RJ	SW CD 3	[M]
S604	EVQ21405RJ	SW CD 4	[M]
S605	EVQ21405RJ	SW CD 5	[M]
S606	EVQ21405RJ	SW CD	[M]
S607	EVQ21405RJ	SW TAPE	[M]
S608	EVQ21405RJ	SW TUNER	[M]
S609	EVQ21405RJ	SW ENTER	[M]
S612	EVQ21405RJ	SW PLAY LIST	[M]
S613	EVQ21405RJ	SW STOP DEMO	[M]

S614	EVQ21405RJ	SW POWER	[M]
S615	EVQ21405RJ	SW REC	[M]
S616	EVQ21405RJ	SW AUX	[M]
S617	EVQ21405RJ	SW CD CHECK	[M]
S619	EVQ21405RJ	SW RETURN	[M]
S620	EVQ21405RJ	SW CD CHANGE	[M]
S621	EVQ21405RJ	SW OPEN/CLOSE	[M]
S622	EVQ21405RJ	SW RE-MASTER	[M]
S623	EVQ21405RJ	SW SS EQ	[M]
S701	RSH1A048-A	SW RESET	[M]
S971	RSH1A018-3U	SW MODE	[M]
S972	RSH1A019-2U	SW HALF	[M]
S973	RSH1A019-2U	SW CR02	[M]
S975	RSH1A019-2U	SW RECINH_F	[M]
S1901	EVQ21405RJ	SW TAPE EJECT	[M]
		CONNECTORS	
CN1	K1MN14B00066	14P FFC CONNECTOR	[M]
CN101	K1KA10A00263	10P CONNECTOR	[M]
CN301	RJU100W13	13P CONNECTOR	[M]
CN302	K1KB11A00020	11P CONNECTOR	[M]
CN303	K1KA02A00008	FAN CONNECTOR	[M]
CN305	K1MN14C00004	14P FFC CONNECTOR	[M]
CN306	K1MN17C00002	17P FFC CONNECTOR	[M]
CN308	K1MN26A00065	CONNECTOR	[M]
CN309	K1MN21A00031	21P CONNECTOR	[M]
CN504	RJT119W08V	8P CONNECTOR	[M]
CN505	K1KB07A00016	7P CONNECTOR	[M]
CN506	RJT119W06V	6P CONNECTOR	[M]
CN507A	REXX0320	2P STANDBY WIRE	[M]
CN604	K1KA13B00053	13P CONNECTOR	[M]
CN606	K1MN26B00010	26P CONNECTOR	[M]
CN701	RJS2A8616	16P FPC CONNECTOR	[M]
CN702	RJS2A7717	17P FFC CONNECTOR	[M]
CN1305	K1MN21B00010	21P FFC CONNECTOR	[M]
CP501	RJT100W13	13P CONNECTOR	[M]
CP502	K1KA11A00093	11P CONNECTOR	[M]
CP1301	RJS1A6805-J	5P CONNECTOR	[M]
CP1902	K1KA09B00058	9P CONNECTOR	[M]
CS971	RJU071H09M1	9P CONNECTOR	[M]
		COILS & TRANSFORMERS	
L203	J0JBC0000019	CHIP INDUCTOR	[M]
L300	G0C3R3JA0027	COIL	[M]
L301	G0A200D00002	RF CHOKE COIL	[M]
L503	RLQZ371	CHOKE COIL	[M] ⚠
L600	RLQB101JTD-D	INDUCTOR	[M]
L601	RLQB101JTD-D	INDUCTOR	[M]
L602	G0C100JA0030	INDUCTOR	[M]
L603	G0C101JA0027	COIL	[M]
L604	G0C3R3JA0027	COIL	[M]
L1301	7L1A62N	BIAS OCS COIL	[M]
L1302	RLQB470JTD-D	RF CHOKE COIL	[M]
T501	G4C6BDD00002	POWER TRANSFORMER	[M] ⚠
T502	ETP28KBZA1PU	SUB TRANSFORMER	[M] ⚠
		COMPONENT COMBINATIONS	

Z301	ENG06802QF	TUNER PACK	[M]
Z501	ERZV10V511CS	ZENER	[M] ⚠
Z601	B3MAZ0000027	INFRARED SENSOR	[M]
		RELAY	
RL501	K6B1ADA00011	RELAY	[M] ⚠
		OSCILLATORS	
X301	H2A100500006	RESONATOR	[M]
X302	RSXD32K7S02	CRYSTAL OSCILLATOR	[M]
X701	RSXC16M9S04	CRYSTAL OSCILLATOR	[M]
		DISPLAY TUBE	
FL600	A2BB00000130	FL	[M]
		FUSE	
F1	K5D162AQ0004	1.6A FUSE	[M] ⚠
		FUSE HOLDERS	
FC1	EYF52BC	FUSE HOLDER	[M]
FC2	EYF52BC	FUSE HOLDER	[M]
		FUSE PROTECTORS	
FP501	K5G402AA0002	FUSE PROTECTOR	[M] ⚠
FP502	K5G102AA0002	FUSE PROTECTOR	[M] ⚠
		HOLDERS	
H303	K1YF08000003	8P WIRE HOLDER	[M]
H503	K1YF06000002	6P WIRE HOLDER	[M]
H601A	RMR0313	CABLE HOLDER	[M]
H601B	RMR0313	CABLE HOLDER	[M]
H604	K1YZ13000001	HOLDER	[M]
H605A	RMR0317	8P WIRE HOLDER	[M]
H605B	RMR0317	8P WIRE HOLDER	[M]
H606	RMR0316	7P WIRE HOLDER	[M]
		JACKS	
JK301	K4BC08B00016	JK SPEAKER	[M]
JK303	K4BK02B00007	JK AUX-IN	[M]
JK501	K2AB2B000002	JK AC INLET	[M] ⚠
JK600	RJJ37TK07-X	JK HEADPHONE	[M]
JK800	K4BK01B00008	JK 1P RCA	[M]
		EARTH TERMINALS	
E300	SNE1004-2	EARTH TERMINAL	[M]
E501	SNE1004-2	EARTH TERMINAL	[M]
E600	K9ZZ00000424	EARTH TERMINAL	[M]
		CHIP RESISTORS	
WA100	ERJ3GEY0R00V	0 1/16W	[M]
WA101	ERJ3GEY0R00V	0 1/16W	[M]
WA102	ERJ3GEY0R00V	0 1/16W	[M]
WA103	ERJ3GEY0R00V	0 1/16W	[M]
WA104	ERJ3GEY0R00V	0 1/16W	[M]
WA105	ERJ3GEY0R00V	0 1/16W	[M]
WA107	ERJ3GEY0R00V	0 1/16W	[M]
WA108	ERJ3GEY0R00V	0 1/16W	[M]
WA109	ERJ3GEY0R00V	0 1/16W	[M]
WA110	ERJ3GEY0R00V	0 1/16W	[M]
WA113	ERJ3GEY0R00V	0 1/16W	[M]
WA114	ERJ3GEY0R00V	0 1/16W	[M]
WA600	ERJ3GEY0R00V	0 1/16W	[M]

WA601	ERJ3GEY0R00V	0 1/16W	[M]
WA610	ERJ3GEY0R00V	0 1/16W	[M]
WA611	ERJ3GEY0R00V	0 1/16W	[M]
WA612	ERJ3GEY0R00V	0 1/16W	[M]
WA613	ERJ3GEY0R00V	0 1/16W	[M]
WA614	ERJ3GEY0R00V	0 1/16W	[M]
WA615	ERJ3GEY0R00V	0 1/16W	[M]
WA616	ERJ3GEY0R00V	0 1/16W	[M]
WA617	ERJ3GEY0R00V	0 1/16W	[M]
WA618	ERJ3GEY0R00V	0 1/16W	[M]
WA619	ERJ3GEY0R00V	0 1/16W	[M]
WA620	ERJ3GEY0R00V	0 1/16W	[M]
WA621	ERJ3GEY0R00V	0 1/16W	[M]
WA622	ERJ3GEY0R00V	0 1/16W	[M]
WA623	ERJ3GEY0R00V	0 1/16W	[M]
		RESISTORS	
R201	ERJ3GEYJ181V	180 1/16W	[M]
R210	ERJ3GEYJ103V	10K 1/16W	[M]
R211	ERJ3GEYJ182V	1.8K 1/16W	[M]
R218	ERJ3GEYJ392V	3.9K 1/16W	[M]
R219	ERJ3GEYJ391V	390 1/16W	[M]
R220	ERJ3GEYJ272V	2.7K 1/16W	[M]
R221	ERJ3GEYJ123V	12K 1/16W	[M]
R222	ERJ3GEYJ102V	1K 1/16W	[M]
R223	ERJ3GEYJ182V	1.8K 1/16W	[M]
R224	ERJ3GEYJ392V	3.9K 1/16W	[M]
R230	ERDS1FVJ100T	10 1/2W	[M]
R231	ERDS1FVJ100T	10 1/2W	[M]
R271	ERJ6GEYJ394V	390K 1/10W	[M]
R272	ERJ6GEYJ272V	2.7K 1/10W	[M]
R273	ERJ3GEYJ102V	1K 1/16W	[M]
R274	ERJ3GEYJ102V	1K 1/16W	[M]
R275	ERJ3GEYJ182V	1.8K 1/16W	[M]
R276	ERJ3GEYJ392V	3.9K 1/16W	[M]
R301	ERJ3GEYJ472V	4.7K 1/16W	[M]
R306	ERJ3GEYJ103V	10K 1/16W	[M]
R307	ERJ3GEYJ101V	100 1/16W	[M]
R308	ERJ3GEYJ101V	100 1/16W	[M]
R309	ERJ3GEYJ103V	10K 1/16W	[M]
R310	ERJ3GEYJ103V	10K 1/16W	[M]
R311	ERJ3GEYJ103V	10K 1/16W	[M]
R312	ERJ3GEYJ222V	2.2K 1/16W	[M]
R313	ERJ3GEYJ101V	100 1/16W	[M]
R314	ERJ3GEYJ101V	100 1/16W	[M]
R315	ERJ3GEYJ101V	100 1/16W	[M]
R316	ERJ3GEYJ101V	100 1/16W	[M]
R317	ERJ3GEYJ101V	100 1/16W	[M]
R318	ERJ3GEYJ101V	100 1/16W	[M]
R319	ERJ3GEYJ101V	100 1/16W	[M]
R320	ERJ3GEYJ101V	100 1/16W	[M]
R321	ERJ3GEYJ101V	100 1/16W	[M]
R322	ERJ3GEYJ101V	100 1/16W	[M]
R323	ERJ3GEYJ472V	4.7K 1/16W	[M]
R324	ERJ3GEYJ472V	4.7K 1/16W	[M]
R325	ERJ3GEYJ473V	47K 1/16W	[M]

R326	ERJ3GEYJ472V	4.7K 1/16W	[M]
R327	ERJ3GEYJ472V	4.7K 1/16W	[M]
R328	ERJ3GEYJ101V	100 1/16W	[M]
R329	ERJ3GEYJ102V	1K 1/16W	[M]
R330	ERJ3GEYJ474V	470K 1/16W	[M]
R331	ERJ3GEYJ103V	10K 1/16W	[M]
R332	ERJ3GEYJ474V	470K 1/16W	[M]
R333	ERJ3GEYJ472V	4.7K 1/16W	[M]
R334	ERJ3GEYJ102V	1K 1/16W	[M]
R335	ERJ3GEYJ101V	100 1/16W	[M]
R336	ERJ3GEYJ472V	4.7K 1/16W	[M]
R337	ERJ3GEYJ472V	4.7K 1/16W	[M]
R338	ERJ3GEYJ472V	4.7K 1/16W	[M]
R339	ERJ3GEYJ101V	100 1/16W	[M]
R340	ERJ3GEYJ101V	100 1/16W	[M]
R341	ERJ3GEYJ101V	100 1/16W	[M]
R342	ERJ3GEYJ103V	10K 1/16W	[M]
R343	ERJ3GEYJ103V	10K 1/16W	[M]
R344	ERJ3GEYJ103V	10K 1/16W	[M]
R345	ERJ3GEYJ103V	10K 1/16W	[M]
R346	ERJ3GEYJ103V	10K 1/16W	[M]
R347	ERJ3GEYJ103V	10K 1/16W	[M]
R348	ERJ3GEYJ103V	10K 1/16W	[M]
R349	ERJ3GEYJ681V	680 1/16W	[M]
R350	ERJ3GEYJ473V	47K 1/16W	[M]
R351	ERJ3GEYJ473V	47K 1/16W	[M]
R352	ERJ3GEYJ472V	4.7K 1/16W	[M]
R353	ERJ3GEYJ472V	4.7K 1/16W	[M]
R354	ERJ3GEYJ681V	680 1/16W	[M]
R355	ERJ3GEYJ334V	330K 1/16W	[M]
R356	ERJ3GEYJ106V	10M 1/16W	[M]
R357	ERJ3GEYJ223V	22K 1/16W	[M]
R358	ERJ3GEYJ223V	22K 1/16W	[M]
R359	ERJ3GEYJ472V	4.7K 1/16W	[M]
R360	ERJ3GEYJ821V	820 1/16W	[M]
R361	ERJ3GEYJ103V	10K 1/16W	[M]
R362	ERJ3GEYJ471V	470 1/16W	[M]
R363	ERJ3GEYJ121V	120 1/16W	[M]
R364	ERJ3GEYJ101V	100 1/16W	[M]
R365	ERJ3GEYJ102V	1K 1/16W	[M]
R366	ERJ3GEYJ102V	1K 1/16W	[M]
R367	ERJ3GEYJ102V	1K 1/16W	[M]
R368	ERJ3GEYJ102V	1K 1/16W	[M]
R369	ERJ3GEYJ102V	1K 1/16W	[M]
R370	ERJ3GEYJ102V	1K 1/16W	[M]
R371	ERJ3GEYJ101V	100 1/16W	[M]
R372	ERJ3GEYJ223V	22K 1/16W	[M]
R373	ERJ3GEYJ122V	1.2K 1/16W	[M]
R374	ERJ3GEYJ122V	1.2K 1/16W	[M]
R375	ERDS1FVJ4R7T	4.7 1/2W	[M]
R377	ERJ3GEYJ223V	22K 1/16W	[M]
R378	ERJ3GEYJ101V	100 1/16W	[M]
R379	ERJ3GEYJ101V	100 1/16W	[M]
R380	ERJ3GEYJ101V	100 1/16W	[M]
R381	ERJ3GEYJ101V	100 1/16W	[M]

R382	ERJ3GEYJ101V	100 1/16W	[M]
R383	ERJ3GEYJ103V	10K 1/16W	[M]
R384	ERJ3GEYJ472V	4.7K 1/16W	[M]
R385	ERJ3GEYJ101V	100 1/16W	[M]
R386	ERJ3GEYJ103V	10K 1/16W	[M]
R388	ERJ3GEYJ473V	47K 1/16W	[M]
R389	ERJ3GEYJ103V	10K 1/16W	[M]
R390	ERJ3GEYJ472V	4.7K 1/16W	[M]
R391	ERJ3GEYJ472V	4.7K 1/16W	[M]
R392	ERJ3GEYJ103V	10K 1/16W	[M]
R393	ERJ3GEYJ101V	100 1/16W	[M]
R394	ERJ3GEYJ101V	100 1/16W	[M]
R395	ERJ3GEYJ101V	100 1/16W	[M]
R396	ERJ3GEYJ101V	100 1/16W	[M]
R397	ERJ3GEYJ101V	100 1/16W	[M]
R398	ERJ3GEYJ103V	10K 1/16W	[M]
R399	ERJ3GEYJ101V	100 1/16W	[M]
R405	ERJ3GEYJ103V	10K 1/16W	[M]
R411	ERJ3GEYJ182V	1.8K 1/16W	[M]
R417	ERJ3GEYJ101V	100 1/16W	[M]
R418	ERJ3GEYJ392V	3.9K 1/16W	[M]
R419	ERJ3GEYJ391V	390 1/16W	[M]
R420	ERJ3GEYJ272V	2.7K 1/16W	[M]
R421	ERJ3GEYJ123V	12K 1/16W	[M]
R422	ERJ3GEYJ102V	1K 1/16W	[M]
R423	ERJ3GEYJ182V	1.8K 1/16W	[M]
R424	ERJ3GEYJ392V	3.9K 1/16W	[M]
R431	ERDS1FVJ100T	10 1/2W	[M]
R432	ERDS1FVJ100T	10 1/2W	[M]
R440	ERJ3GEYJ102V	1K 1/16W	[M]
R450	ERJ3GEYJ102V	1K 1/16W	[M]
R452	ERJ3GEYJ101V	100 1/16W	[M]
R453	ERJ3GEYJ101V	100 1/16W	[M]
R454	ERJ3GEYJ101V	100 1/16W	[M]
R455	ERJ3GEYJ472V	4.7K 1/16W	[M]
R456	ERJ3GEYJ472V	4.7K 1/16W	[M]
R457	ERJ3GEYJ472V	4.7K 1/16W	[M]
R458	ERJ3GEYJ472V	4.7K 1/16W	[M]
R459	ERJ3GEYJ101V	100 1/16W	[M]
R461	ERJ3GEYJ472V	4.7K 1/16W	[M]
R462	ERD2FCVG100T	10 1/4W	[M]
R471	ERJ6GEYJ394V	390K 1/10W	[M]
R472	ERJ6GEYJ272V	2.7K 1/10W	[M]
R473	ERJ3GEYJ102V	1K 1/16W	[M]
R474	ERJ3GEYJ102V	1K 1/16W	[M]
R475	ERJ3GEYJ182V	1.8K 1/16W	[M]
R476	ERJ3GEYJ392V	3.9K 1/16W	[M]
R503	ERC12UGK335D	3.3M 1/2W	[M]
R505	D0AE563JA048	56K 1/4W	[M]
R506	D0AE563JA048	56K 1/4W	[M]
R511	ERDS1FVJ102T	1K 1/2W	[M]
R512	ERDS1FVJ151T	150 1/2W	[M]
R514	D0AE563JA048	56K 1/4W	[M]
R515	D0AE563JA048	56K 1/4W	[M]
R517	ERDS2TJ331T	330 1/4W	[M]

R518	D0AE122JA048	1.2K 1/4W	[M]
R519	ERDS2TJ2R2T	2.2 1/4W	[M]
R520	ERDS2TJ2R2T	2.2 1/4W	[M]
R524	ERDS2TJ2R2T	2.2 1/4W	[M]
R526	ERDS2TJ103T	10K 1/4W	[M]
R532	ERDS2TJ153T	15K 1/4W	[M]
R533	ERDS2TJ153T	15K 1/4W	[M]
R534	ERDS1FVJ331T	330 1/2W	[M]
R536	ERDS1FVJ2R2T	2.2 1/2W	[M]
R537	ERDS2TJ222T	2.2K 1/4W	[M]
R539	ERDS1FVJ221T	220 1/2W	[M]
R540	ERDS2TJ153T	15K 1/4W	[M]
R541	ERDS2TJ153T	15K 1/4W	[M]
R542	ERDS2TJ332T	3.3K 1/4W	[M]
R543	ERDS2TJ332T	3.3K 1/4W	[M]
R544	D0AE562JA048	5.6K 1/4W	[M]
R545	D0AE562JA048	5.6K 1/4W	[M]
R546	D0AE223JA048	22K 1/4W	[M]
R547	ERDS2TJ683T	68K 1/4W	[M]
R548	ERDS2TJ184T	180K 1/4W	[M]
R549	ERDS1FVJ2R2T	2.2 1/2W	[M]
R550	ERDS1FVJ331T	330 1/2W	[M]
R551	ERDS2TJ104T	100K 1/4W	[M]
R554	ERDS1FVJ331T	330 1/2W	[M]
R556	ERDS1FVJ2R2T	2.2 1/2W	[M]
R561	ERDS2TJ104T	100K 1/4W	[M]
R562	ERDS2TJ394T	390K 1/4W	[M]
R565	ERDS2TJ123T	12K 1/4W	[M]
R566	ERDS2TJ103T	10K 1/4W	[M]
R567	ERDS2TJ151T	150 1/4W	[M]
R568	ERDS1FVJ150T	15 1/2W	[M]
R569	ERDS1FVJ270T	27 1/2W	[M]
R571	ERDS1FVJ332T	3.3K 1/2W	[M]
R572	ERDS2TJ561T	560 1/4W	[M]
R573	D0AE272JA048	2.7K 1/4W	[M]
R574	D0AE272JA048	2.7K 1/4W	[M]
R576	ERDS2TJ103T	10K 1/4W	[M]
R577	ERDS2TJ103T	10K 1/4W	[M]
R578	ERDS2TJ332T	3.3K 1/4W	[M]
R580	ERDS1FVJ180T	18 1/2W	[M]
R581	ERDS1FVJ180T	18 1/2W	[M]
R583	ERDS2TJ821T	820 1/4W	[M]
R584	ERDS2TJ151T	150 1/4W	[M]
R585	ERDS1FVJ220T	22 1/2W	[M]
R586	ERDS2TJ151T	150 1/4W	[M]
R587	D0AE472JA048	4.7K 1/4W	[M]
R589	ERD2FCVJ4R7T	4.7 1/4W	[M]
R591	ERDS2TJ101T	100 1/4W	[M]
R600	ERJ3GEYJ680V	68 1/16W	[M]
R601	ERJ3GEYJ680V	68 1/16W	[M]
R602	D0GB470JA008	47 1/16W	[M]
R603	ERJ3GEYJ153V	15K 1/16W	[M]
R604	ERJ3GEYJ103V	10K 1/16W	[M]
R605	ERJ3GEYJ223V	22K 1/16W	[M]
R606	ERJ3GEYJ123V	12K 1/16W	[M]

R607	ERJ3GEYJ102V	1K 1/16W	[M]
R610	ERJ3GEYJ182V	1.8K 1/16W	[M]
R611	ERJ3GEYJ222V	2.2K 1/16W	[M]
R612	ERJ3GEYJ222V	2.2K 1/16W	[M]
R613	ERJ3GEYJ272V	2.7K 1/16W	[M]
R614	ERJ3GEYJ102V	1K 1/16W	[M]
R615	ERJ3GEYJ102V	1K 1/16W	[M]
R616	ERJ3GEYJ122V	1.2K 1/16W	[M]
R617	ERJ3GEYJ102V	1K 1/16W	[M]
R618	ERJ3GEYJ102V	1K 1/16W	[M]
R619	ERJ3GEYJ122V	1.2K 1/16W	[M]
R620	ERJ3GEYJ182V	1.8K 1/16W	[M]
R621	ERJ3GEYJ182V	1.8K 1/16W	[M]
R622	ERJ3GEYJ222V	2.2K 1/16W	[M]
R623	ERJ3GEYJ272V	2.7K 1/16W	[M]
R624	ERJ3GEYJ472V	4.7K 1/16W	[M]
R625	ERJ3GEYJ682V	6.8K 1/16W	[M]
R626	ERJ3GEYJ222V	2.2K 1/16W	[M]
R627	ERJ3GEYJ472V	4.7K 1/16W	[M]
R628	ERJ3GEYJ471V	470 1/16W	[M]
R629	ERJ3GEYJ471V	470 1/16W	[M]
R630	ERJ3GEYJ223V	22K 1/16W	[M]
R631	ERJ3GEYJ102V	1K 1/16W	[M]
R632	ERJ3GEYJ102V	1K 1/16W	[M]
R633	ERJ3GEYJ102V	1K 1/16W	[M]
R634	ERJ3GEYJ102V	1K 1/16W	[M]
R636	ERJ3GEYJ472V	4.7K 1/16W	[M]
R637	ERJ3GEYJ331V	330 1/16W	[M]
R638	ERJ3GEYJ331V	330 1/16W	[M]
R639	ERJ3GEYJ472V	4.7K 1/16W	[M]
R640	ERJ3GEYJ272V	2.7K 1/16W	[M]
R643	ERJ3GEYJ102V	1K 1/16W	[M]
R644	ERJ3GEYJ102V	1K 1/16W	[M]
R645	ERJ3GEYJ102V	1K 1/16W	[M]
R646	ERJ3GEYJ102V	1K 1/16W	[M]
R647	ERJ3GEYJ104V	100K 1/16W	[M]
R648	ERJ3GEYJ472V	4.7K 1/16W	[M]
R649	ERJ3GEYJ472V	4.7K 1/16W	[M]
R700	ERDS1FVJ180T	18 1/2W	[M]
R701	D0AE563JA048	56K 1/4W	[M]
R701	ERJ3GEYJ4R7V	4.7 1/16W	[M]
R702	ERDS2TJ101T	100 1/4W	[M]
R702	ERJ3GEYJ472V	4.7K 1/16W	[M]
R703	ERDS2TJ103T	10K 1/4W	[M]
R704	D0AE563JA048	56K 1/4W	[M]
R704	ERJ3GEYJ102V	1K 1/16W	[M]
R705	ERDS2TJ103T	10K 1/4W	[M]
R705	ERJ3GEYJ393V	39K 1/16W	[M]
R706	D0AE472JA048	4.7K 1/4W	[M]
R706	ERJ3GEYJ102V	1K 1/16W	[M]
R707	D0AE562JA048	5.6K 1/4W	[M]
R707	ERJ3GEY0R00V	0 1/16W	[M]
R708	ERDS2TJ103T	10K 1/4W	[M]
R708	ERJ3GEY0R00V	0 1/16W	[M]
R709	ERDS2TJ824T	820K 1/4W	[M]

R709	ERJ3GEYJ104V	100K 1/16W	[M]
R710	D0AE563JA048	56K 1/4W	[M]
R711	ERDS2TJ824T	820K 1/4W	[M]
R711	ERJ3GEYJ823V	82K 1/16W	[M]
R712	ERDS2TJ102T	1K 1/4W	[M]
R712	ERJ3GEYJ821V	820 1/16W	[M]
R713	D0AE563JA048	56K 1/4W	[M]
R714	ERJ3GEYJ471V	470 1/16W	[M]
R715	ERJ3GEYJ332V	3.3K 1/16W	[M]
R717	ERJ3GEYJ102V	1K 1/16W	[M]
R718	ERJ3GEYJ102V	1K 1/16W	[M]
R720	ERDS2TJ823T	82K 1/4W	[M]
R720	ERJ3GEYJ105V	1M 1/16W	[M]
R721	ERDS2TJ823T	82K 1/4W	[M]
R721	ERJ3GEYJ101V	100 1/16W	[M]
R722	ERDS2TJ104T	100K 1/4W	[M]
R723	ERDS2TJ102T	1K 1/4W	[M]
R723	ERJ3GEYJ332V	3.3K 1/16W	[M]
R724	ERDS2TJ104T	100K 1/4W	[M]
R725	ERDS2TJ102T	1K 1/4W	[M]
R725	ERJ3GEYJ331V	330 1/16W	[M]
R726	ERDS2TJ273T	27K 1/4W	[M]
R727	ERDS2TJ104T	100K 1/4W	[M]
R727	ERJ3GEYJ102V	1K 1/16W	[M]
R728	ERDS2TJ102T	1K 1/4W	[M]
R728	ERJ3GEYJ183V	18K 1/16W	[M]
R729	ERDS2TJ102T	1K 1/4W	[M]
R729	ERJ3GEYJ102V	1K 1/16W	[M]
R730	ERDS2TJ224T	220K 1/4W	[M]
R731	ERDS2TJ682T	6.8K 1/4W	[M]
R731	ERJ3GEYJ223V	22K 1/16W	[M]
R732	ERDS2TJ822T	8.2K 1/4W	[M]
R733	ERDS2TJ822T	8.2K 1/4W	[M]
R734	ERDS2TJ222T	2.2K 1/4W	[M]
R735	ERDS2TJ224T	220K 1/4W	[M]
R735	ERJ3GEYJ101V	100 1/16W	[M]
R736	ERDS2TJ682T	6.8K 1/4W	[M]
R736	ERJ3GEYJ101V	100 1/16W	[M]
R737	ERDS2TJ681T	680 1/4W	[M]
R737	ERJ3GEYJ682V	6.8K 1/16W	[M]
R738	ERDS2TJ822T	8.2K 1/4W	[M]
R738	ERJ3GEYJ682V	6.8K 1/16W	[M]
R739	ERDS2TJ681T	680 1/4W	[M]
R740	ERDS2TJ183T	18K 1/4W	[M]
R741	D0AE562JA048	5.6K 1/4W	[M]
R742	ERDS2TJ392T	3.9K 1/4W	[M]
R742	ERJ3GEYJ103V	10K 1/16W	[M]
R743	ERDS2TJ271T	270 1/4W	[M]
R743	ERJ3GEYJ472V	4.7K 1/16W	[M]
R744	ERDS2TJ183T	18K 1/4W	[M]
R744	ERJ3GEYJ393V	39K 1/16W	[M]
R745	D0AE562JA048	5.6K 1/4W	[M]
R746	ERDS2TJ392T	3.9K 1/4W	[M]
R747	ERDS2TJ271T	270 1/4W	[M]
R748	ERDS2TJ152T	1.5K 1/4W	[M]

R749	ERDS2TJ152T	1.5K 1/4W	[M]
R749	ERJ3GEYJ183V	18K 1/16W	[M]
R750	ERDS2TJ332T	3.3K 1/4W	[M]
R751	ERDS2TJ332T	3.3K 1/4W	[M]
R752	ERDS2TJ104T	100K 1/4W	[M]
R753	ERDS2TJ222T	2.2K 1/4W	[M]
R753	ERJ3GEYJ100V	10 1/16W	[M]
R754	D0GB5R6JA002	5.6 1/16W	[M]
R754	ERDS2TJ220T	22 1/4W	[M]
R755	ERDS2TJ220T	22 1/4W	[M]
R756	ERDS2TJ220T	22 1/4W	[M]
R757	ERDS2TJ220T	22 1/4W	[M]
R758	ERDS2TJ222T	2.2K 1/4W	[M]
R759	D0AE472JA048	4.7K 1/4W	[M]
R760	D0AE223JA048	22K 1/4W	[M]
R760	ERJ3GEYJ101V	100 1/16W	[M]
R761	D0AE223JA048	22K 1/4W	[M]
R761	ERJ3GEYJ103V	10K 1/16W	[M]
R762	D0AE562JA048	5.6K 1/4W	[M]
R762	ERJ3GEYJ103V	10K 1/16W	[M]
R763	D0AE562JA048	5.6K 1/4W	[M]
R763	ERJ3GEYJ103V	10K 1/16W	[M]
R764	ERDS2TJ683T	68K 1/4W	[M]
R764	ERJ3GEYJ102V	1K 1/16W	[M]
R765	ERDS2TJ683T	68K 1/4W	[M]
R766	ERDS2TJ822T	8.2K 1/4W	[M]
R767	ERDS2TJ822T	8.2K 1/4W	[M]
R768	D0AE472JA048	4.7K 1/4W	[M]
R769	D0AE472JA048	4.7K 1/4W	[M]
R770	ERDS2TJ332T	3.3K 1/4W	[M]
R771	ERDS2TJ104T	100K 1/4W	[M]
R772	D0AE472JA048	4.7K 1/4W	[M]
R773	ERDS2TJ102T	1K 1/4W	[M]
R774	ERDS2TJ104T	100K 1/4W	[M]
R775	ERDS2TJ153T	15K 1/4W	[M]
R776	ERDS2TJ102T	1K 1/4W	[M]
R777	ERDS2TJ222T	2.2K 1/4W	[M]
R778	ERDS2TJ153T	15K 1/4W	[M]
R779	ERDS2TJ822T	8.2K 1/4W	[M]
R780	D0AE473JA048	47K 1/4W	[M]
R781	D0AE473JA048	47K 1/4W	[M]
R790	ERDS2TJ332T	3.3K 1/4W	[M]
R791	ERDS2TJ332T	3.3K 1/4W	[M]
R792	ERDS2TJ561T	560 1/4W	[M]
R793	ERDS2TJ101T	100 1/4W	[M]
R794	ERDS2TJ103T	10K 1/4W	[M]
R795	ERDS2TJ153T	15K 1/4W	[M]
R796	ERDS2TJ153T	15K 1/4W	[M]
R797	ERD2FCVJ4R7T	4.7 1/4W	[M]
R798	ERDS2TJ102T	1K 1/4W	[M]
R799	ERDS2TJ102T	1K 1/4W	[M]
R800	ERJ3GEY0R00V	0 1/16W	[M]
R802	ERJ3GEYJ221V	220 1/16W	[M]
R803	ERJ3GEYJ222V	2.2K 1/16W	[M]
R972	ERDS2TJ821T	820 1/4W	[M]

R973	ERDS2TJ393T	39K 1/4W	[M]
R1061	ERJ3GEY0R00V	0 1/16W	[M]
R1063	ERJ3GEY0R00V	0 1/16W	[M]
R1101	ERJ3GEYJ330V	33 1/16W	[M]
R1102	ERJ3GEYJ152V	1.5K 1/16W	[M]
R1103	ERJ3GEYJ183V	18K 1/16W	[M]
R1104	ERJ3GEYJ103V	10K 1/16W	[M]
R1105	ERJ3GEYJ222V	2.2K 1/16W	[M]
R1106	ERJ3GEYJ104V	100K 1/16W	[M]
R1107	ERJ3GEYJ102V	1K 1/16W	[M]
R1109	ERJ3GEYJ102V	1K 1/16W	[M]
R1110	ERJ3GEYJ333V	33K 1/16W	[M]
R1201	ERJ3GEYJ330V	33 1/16W	[M]
R1202	ERJ3GEYJ152V	1.5K 1/16W	[M]
R1203	ERJ3GEYJ183V	18K 1/16W	[M]
R1204	ERJ3GEYJ103V	10K 1/16W	[M]
R1205	ERJ3GEYJ222V	2.2K 1/16W	[M]
R1206	ERJ3GEYJ104V	100K 1/16W	[M]
R1207	ERJ3GEYJ102V	1K 1/16W	[M]
R1209	ERJ3GEYJ102V	1K 1/16W	[M]
R1210	ERJ3GEYJ333V	33K 1/16W	[M]
R1302	ERJ3GEYJ471V	470 1/16W	[M]
R1303	ERJ3GEYJ475V	4.7M 1/16W	[M]
R1304	ERJ3GEYJ223V	22K 1/16W	[M]
R1305	ERJ3GEYJ103V	10K 1/16W	[M]
R1309	ERDS1FVJ471T	470 1/2W	[M]
R1313	ERJ3GEYJ103V	10K 1/16W	[M]
R1314	ERJ3GEYJ102V	1K 1/16W	[M]
R1318	ERJ3GEYJ103V	10K 1/16W	[M]
R1327	ERJ3GEYJ472V	4.7K 1/16W	[M]
R1328	ERJ3GEYJ153V	15K 1/16W	[M]
R1329	ERJ3GEYJ472V	4.7K 1/16W	[M]
R1330	ERD2FCVJ4R7T	4.7 1/4W	[M]
R1331	ERJ3GEYJ752V	7.5K 1/16W	[M]
R1332	ERJ3GEYJ103V	10K 1/16W	[M]
R1333	ERD2FCVJ4R7T	4.7 1/4W	[M]
R1334	ERJ3GEYJ223V	22K 1/16W	[M]
R1335	ERJ3GEYJ152V	1.5K 1/16W	[M]
R1337	ERJ3GEYJ103V	10K 1/16W	[M]
R1338	ERJ3GEYJ472V	4.7K 1/16W	[M]
R1341	ERJ3GEYJ471V	470 1/16W	[M]
R1342	ERJ3GEYJ473V	47K 1/16W	[M]
R1343	ERJ3GEYJ332V	3.3K 1/16W	[M]
R1344	ERJ3GEYJ273V	27K 1/16W	[M]
R1345	ERJ3GEYJ102V	1K 1/16W	[M]
R1371	ERJ3GEYJ223V	22K 1/16W	[M]
R1374	ERJ3GEYJ471V	470 1/16W	[M]
R1380	ERJ3GEY0R00V	0 1/16W	[M]
R1401	ERJ3GEYJ123V	12K 1/16W	[M]
R1402	ERJ3GEYJ274V	270K 1/16W	[M]
R1403	ERJ3GEYJ103V	10K 1/16W	[M]
R1404	ERJ3GEYJ223V	22K 1/16W	[M]
R1405	ERJ3GEYJ103V	10K 1/16W	[M]
		WIRES	
JW303	REXV0019	8P WIRE (SP-POWER)	[M]

JW503	REXV0020	6P WIRE (PWR-TRAN)	[M]
JW601	RWJ1104100XX	4P WIRE (PWR IN-PNL)	[M]
JW603	REXV0025	13P WIRE (PNL-MAIN)	[M]
JW605	RWJ1108100XX	8P WIRE	[M]
JW606	RWJ0207180XQ	7P WIRE (PANEL-TRAN)	[M]
WR1308A	RWJ0102110SS	2P (MTR WIRE)	[M]
WR1903	RWJ0102050KR	2P (MOTOR WIRE)	[M]
		CAPACITORS	
C11	F1D1E103A001	0.01 25V	[M]
C12	F2A1C101A235	100P 16V	[M]
C21	F1D1E103A001	0.01 25V	[M]
C22	F2A1C101A235	100P 16V	[M]
C200	ECJ1VB1E183K	0.018 25V	[M]
C201	ECA1CAK101XB	100 16V	[M]
C209	ECJ1VC1H102J	1000P 50V	[M]
C211	ECJ1VB1H471K	470P 50V	[M]
C212	ECJ1VB1H102K	1000P 50V	[M]
C214	ECJ1VB1H221K	220P 50V	[M]
C217	ECJ1VC1H102J	1000P 50V	[M]
C219	ECA1CAK100XB	10 16V	[M]
C220	ECA1CAK100XB	10 16V	[M]
C222	ECA1CAK100XB	10 16V	[M]
C224	ECA1CAK100XB	10 16V	[M]
C234	ECA1EPX470B	47 25V	[M]
C236	F1H1E104A029	0.1 25V	[M]
C237	F1H1E104A029	0.1 25V	[M]
C240	F1H1E104A029	0.1 25V	[M]
C241	F1H1E104A029	0.1 25V	[M]
C242	F1H1H104A783	0.1 50V	[M]
C243	F1H1H104A783	0.1 50V	[M]
C244	F1H1H104A783	0.1 50V	[M]
C245	ECJ1VC1H181J	180P 50V	[M]
C270	ECJ1VC1H561K	560P 50V	[M]
C271	ECQV1H154JZ3	0.15 50V	[M]
C272	ECQV1H154JZ3	0.15 50V	[M]
C301	F1H1H104A783	0.1 50V	[M]
C303	ECJ1VB1H471K	470P 50V	[M]
C304	ECJ1VC1H101K	100P 50V	[M]
C305	ECJ1VC1H101K	100P 50V	[M]
C306	ECJ1VC1H101K	100P 50V	[M]
C308	ECJ1VC1H101K	100P 50V	[M]
C310	ECJ1VB1E103K	0.01 25V	[M]
C311	F4D55334A008	0.33 20V	[M]
C312	ECJ2VF1H104Z	0.1 50V	[M]
C313	ECA0JAK101XB	100 6.3V	[M]
C314	ECA1HAK010XB	1 50V	[M]
C315	ECJ1VC1H101K	100P 50V	[M]
C316	ECA1HAK2R2XB	2.2 50V	[M]
C317	ECJ1VC1H102J	1000P 50V	[M]
C318	ECJ1VC1H560J	56P 50V	[M]
C319	ECJ1VB1H102K	1000P 50V	[M]
C320	ECJ1VC1H560J	56P 50V	[M]
C321	ECJ1VC1H680J	68P 50V	[M]
C322	ECJ1VC1H680J	68P 50V	[M]
C323	ECJ1VC1H180J	18P 50V	[M]

C324	ECJ1VC1H220J	22P 50V	[M]
C325	ECJ1VB1E223K	0.022 25V	[M]
C326	ECJ1VB1H103K	0.01 50V	[M]
C327	ECJ1VB1H221K	220P 50V	[M]
C329	ECJ1VC1H101K	100P 50V	[M]
C331	ECJ1VC1H101K	100P 50V	[M]
C333	ECJ1VB1H561K	560P 50V	[M]
C334	ECJ1VB1H561K	560P 50V	[M]
C335	ECJ1VB1H561K	560P 50V	[M]
C336	ECJ1VB1H561K	560P 50V	[M]
C337	ECJ1VB1H561K	560P 50V	[M]
C338	ECJ1VB1H561K	560P 50V	[M]
C339	ECJ1VB1H561K	560P 50V	[M]
C340	F1H1H104A783	0.1 50V	[M]
C341	ECA0JAK101XB	100 6.3V	[M]
C342	ECJ1VB1H102K	1000P 50V	[M]
C343	ECJ1VB1H103K	0.01 50V	[M]
C344	ECJ1VC1H101J	100P 50V	[M]
C345	ECJ1VC1H101J	100P 50V	[M]
C358	ECA1CAM221XB	220 16V	[M]
C359	ECEA1AKA101B	100 10V	[M]
C362	ECA1AAK220XB	22 10V	[M]
C363	ECJ1VC1H101J	100P 50V	[M]
C364	ECJ1VC1H101J	100P 50V	[M]
C367	F1H1H104A783	0.1 50V	[M]
C368	F1H1H104A783	0.1 50V	[M]
C372	ECA1HAK2R2XB	2.2 50V	[M]
C373	ECJ1VB1H471K	470P 50V	[M]
C374	ECJ1VB1H471K	470P 50V	[M]
C395	F1H1H104A783	0.1 50V	[M]
C399	ECJ1VC1H101K	100P 50V	[M]
C400	ECJ1VB1E183K	0.018 25V	[M]
C409	ECJ1VC1H102J	1000P 50V	[M]
C411	ECJ1VB1H471K	470P 50V	[M]
C412	ECJ1VB1H102K	1000P 50V	[M]
C414	ECJ1VB1H221K	220P 50V	[M]
C417	ECJ1VC1H102J	1000P 50V	[M]
C419	ECA1CAK100XB	10 16V	[M]
C420	ECA1CAK100XB	10 16V	[M]
C422	ECA1CAK100XB	10 16V	[M]
C424	ECA1CAK100XB	10 16V	[M]
C436	F1H1E104A029	0.1 25V	[M]
C437	F1H1E104A029	0.1 25V	[M]
C440	F1H1E104A029	0.1 25V	[M]
C441	F1H1E104A029	0.1 25V	[M]
C445	ECJ1VC1H181J	180P 50V	[M]
C470	ECJ1VC1H561K	560P 50V	[M]
C471	ECQV1H154JZ3	0.15 50V	[M]
C472	ECQV1H154JZ3	0.15 50V	[M]
C500	F1D1H821A012	820P 50V	[M]
C501	F1D1H821A012	820P 50V	[M]
C502	F1D1H821A012	820P 50V	[M]
C503	F1D1H821A012	820P 50V	[M]
C504	F1D1H330A041	33P 50V	[M]
C505	F1D1H330A041	33P 50V	[M]

C506	ECA1SAM222YE	2200 100V	[M]
C507	ECA1SAM222YE	2200 100V	[M]
C508	ECA1EAM332XE	3300 25V	[M]
C509	F1D1H330A041	33P 50V	[M]
C510	F1D1H330A041	33P 50V	[M]
C511	F1B1H103A007	0.01 50V	[M]
C512	ECA1EAM101XB	100 25V	[M]
C515	F1E1H1030001	0.01 50V	[M]
C516	ECA1HAK100XB	10 50V	[M]
C517	ECKR2H103ZF5	0.01 500V	[M]
C518	F1B1H103A007	0.01 50V	[M]
C520	F1B1H103A007	0.01 50V	[M]
C521	ECA1EAK330XB	33 25V	[M]
C526	ECA1HM330B	33 50V	[M]
C528	F1B1H103A007	0.01 50V	[M]
C530	ECQE1104KF3	0.1 100V	[M]
C533	ECQV1H104JZ3	0.1 50V	[M]
C536	ECA0JAK221XB	220 6.3V	[M]
C537	F1D1H102A012	1000P 50V	[M]
C538	ECA1HAK220XB	22 50V	[M]
C539	F1B1H103A007	0.01 50V	[M]
C548	ECKR1H103KB5	0.01 50V	[M]
C575	ECA1HAK4R7XB	4.7 50V	[M]
C578	F1B1H103A007	0.01 50V	[M]
C580	F1B1H103A007	0.01 50V	[M]
C581	ECA1HAM470XB	47 50V	[M]
C582	ECQE1104KF3	0.1 100V	[M]
C583	F1B1H103A007	0.01 50V	[M]
C584	ECA1CAM102XB	1000 16V	[M]
C585	ECA1EAM101XB	100 25V	[M]
C586	ECA2AM100B	10 100V	[M]
C587	ECA1JM101B	100 63V	[M]
C588	ECA1JM101B	100 63V	[M]
C600	ECA1HAK220XB	22 50V	[M]
C601	ECA1HAK220XB	22 50V	[M]
C602	ECA1HAK220XB	22 50V	[M]
C603	ECJ1VB1H102K	1000P 50V	[M]
C604	ECJ1VB1E223K	0.022 25V	[M]
C605	ECJ1VB1E223K	0.022 25V	[M]
C606	ERJ1VC1H560J	56P 50V	[M]
C608	ECEA0JKA470B	47 6.3V	[M]
C609	ECJ1VB1H103K	0.01 50V	[M]
C610	ECJ1VB1H102K	1000P 50V	[M]
C611	ECJ1VC1H101J	100P 50V	[M]
C612	ECJ1VC1H101J	100P 50V	[M]
C615	ECJ1VC1H470J	47P 50V	[M]
C616	ECJ1VC1H470J	47P 50V	[M]
C617	ECJ1VB1H221K	220P 50V	[M]
C618	ECJ1VB1H221K	220P 50V	[M]
C619	F1H1H104A783	0.1 50V	[M]
C620	ECA1HAK220XB	22 50V	[M]
C621	F1H1H104A783	0.1 50V	[M]
C622	ECJ1VC1H470J	47P 50V	[M]
C623	ECJ1VC1H470J	47P 50V	[M]
C624	ECJ1VB1H221K	220P 50V	[M]

C625	ECJ1VB1H221K	220P 50V	[M]
C626	F1H1H104A783	0.1 50V	[M]
C627	ECA1HAK220XB	22 50V	[M]
C628	ECA1HAK220XB	22 50V	[M]
C629	F1H1H104A783	0.1 50V	[M]
C630	ECJ1VC1H331J	330P 50V	[M]
C700	ECA0JAK101XB	100 6.3V	[M]
C701	ECA1EAK330XB	33 25V	[M]
C701	ECEA0JKA330I	33 6.3V	[M]
C702	ECA1HAK2R2XB	2.2 50V	[M]
C702	F1H1A474A025	0.47 10V	[M]
C703	ECEA0JKA101I	100 6.3V	[M]
C703	F1D1H1040002	0.1 50V	[M]
C704	ECA0JAK221XB	220 6.3V	[M]
C704	F1H1C104A065	0.1 16V	[M]
C705	ECEA1AKN100B	10 10V	[M]
C705	F1H1C104A065	0.1 16V	[M]
C706	ECJ1VF1A105Z	10 10V	[M]
C707	ECJ1VB1C393K	0.039 16V	[M]
C709	F1D1H102A012	1000P 50V	[M]
C710	ECJ1VC1H471J	470P 50V	[M]
C710	F1D1H102A012	1000P 50V	[M]
C711	ECA1CAK100XB	10 16V	[M]
C711	F1H1C104A065	0.1 16V	[M]
C712	F1D1C272A010	2700P 16V	[M]
C712	F1H1C104A065	0.1 16V	[M]
C713	ECEA1HKN010B	1 50V	[M]
C713	F1H1C104A065	0.1 16V	[M]
C714	ECEA0JKA101I	100 6.3V	[M]
C714	F1C1C123A001	0.012 16V	[M]
C715	F1D1C272A010	2700P 16V	[M]
C715	F1H1A474A025	0.47 10V	[M]
C716	ECEA1HKN010B	1 50V	[M]
C716	ECJ1VB1H681K	680P 50V	[M]
C717	F1C1C123A001	0.012 16V	[M]
C717	F1H1C104A065	0.1 16V	[M]
C718	ECJ1VB1C823K	0.082 16V	[M]
C719	ECEA1AKA101B	100 10V	[M]
C720	ECEA1HKN010B	1 50V	[M]
C721	F1D1C392A010	3900P 16V	[M]
C721	F1H1H220A230	22P 50V	[M]
C722	ECJ1VC1H270J	27P 50V	[M]
C722	F1D1C392A010	3900P 16V	[M]
C723	ECEA0JKA221I	220 6.3V	[M]
C723	ECEA1HKN010B	1 50V	[M]
C724	F1D1C392A010	3900P 16V	[M]
C724	F1H1C104A065	0.1 16V	[M]
C725	ECJ1VB1H102K	1000P 50V	[M]
C725	F1D1C392A010	3900P 16V	[M]
C726	ECA1CAK100XB	10 16V	[M]
C726	ECJ1VB1H102K	1000P 50V	[M]
C727	ECA1CAK100XB	10 16V	[M]
C727	ECA1HAK010XI	1 50V	[M]
C728	ECA1HAK010XI	1 50V	[M]
C728	F1D1H332A046	3300P 50V	[M]

C729	F1D1H332A046	3300P 50V	[M]
C729	F1H1C104A065	0.1 16V	[M]
C730	ECA1HAKR22XB	0.22 50V	[M]
C730	F1H1C104A065	0.1 16V	[M]
C731	ECA0JAK221XI	220 6.3V	[M]
C731	ECA1HAKR22XB	0.22 50V	[M]
C732	ECA1CAK221XB	220 16V	[M]
C733	ECA1HAKR33XB	0.33 50V	[M]
C733	F1H1C104A065	0.1 16V	[M]
C734	ECA1HAKR33XB	0.33 50V	[M]
C734	ECEA1AKA221I	220 10V	[M]
C735	F1H1E104A030	0.1 25V	[M]
C736	ECQV1H473JZ3	0.047 50V	[M]
C736	F1H1E104A030	0.1 25V	[M]
C737	ECJ1VB1E103K	0.01 25V	[M]
C737	ECQV1H473JZ3	0.047 50V	[M]
C738	ECA1CAK100XB	10 16V	[M]
C738	ECJ1VB1C563K	0.056 16V	[M]
C739	ECJ1VB1E183K	0.018 25V	[M]
C739	F1D1H471A012	470P 50V	[M]
C740	F1D1H471A012	470P 50V	[M]
C740	F1H1C104A065	0.1 16V	[M]
C741	ECA1HAKR47XB	0.47 50V	[M]
C741	ECJ1VB1H102K	1000P 50V	[M]
C742	ECA1HAKR47XB	0.47 50V	[M]
C742	ECJ1VB1C473K	0.047 16V	[M]
C743	F1E1H1030001	0.01 50V	[M]
C743	F1H1E104A030	0.1 25V	[M]
C744	ECJ1VB1E153K	0.015 25V	[M]
C744	F1E1H1030001	0.01 50V	[M]
C745	F1D1H101A012	100P 50V	[M]
C745	F1H1E104A030	0.1 25V	[M]
C746	F1D1H101A012	100P 50V	[M]
C746	F1H1C104A065	0.1 16V	[M]
C747	ECJ1VB1H471K	470P 50V	[M]
C747	F1D1H270A006	27P 50V	[M]
C748	F1D1H270A006	27P 50V	[M]
C748	F1H1C104A065	0.1 16V	[M]
C749	ECJ1VB1H392K	3900P 50V	[M]
C749	ECQB1H273JF3	0.027 50V	[M]
C750	ECQB1H273JF3	0.027 50V	[M]
C750	F1H1C104A065	0.1 16V	[M]
C751	ECA1CAK100XB	10 16V	[M]
C751	F1H1C104A065	0.1 16V	[M]
C752	ECA1CAK100XB	10 16V	[M]
C752	ECJ1VB1E183K	0.018 25V	[M]
C753	ECJ1VB1H471K	470P 50V	[M]
C754	F1H1C104A065	0.1 16V	[M]
C755	F1H1C104A065	0.1 16V	[M]
C757	ECEA0JKA101I	100 6.3V	[M]
C758	F1H1C104A065	0.1 16V	[M]
C760	ECA1CAK330XB	33P 16V	[M]
C761	F1B1H103A007	0.01 50V	[M]
C800	ECA1HAK010XB	1 50V	[M]
C802	ECEA1HKA2R2B	2.2 50V	[M]

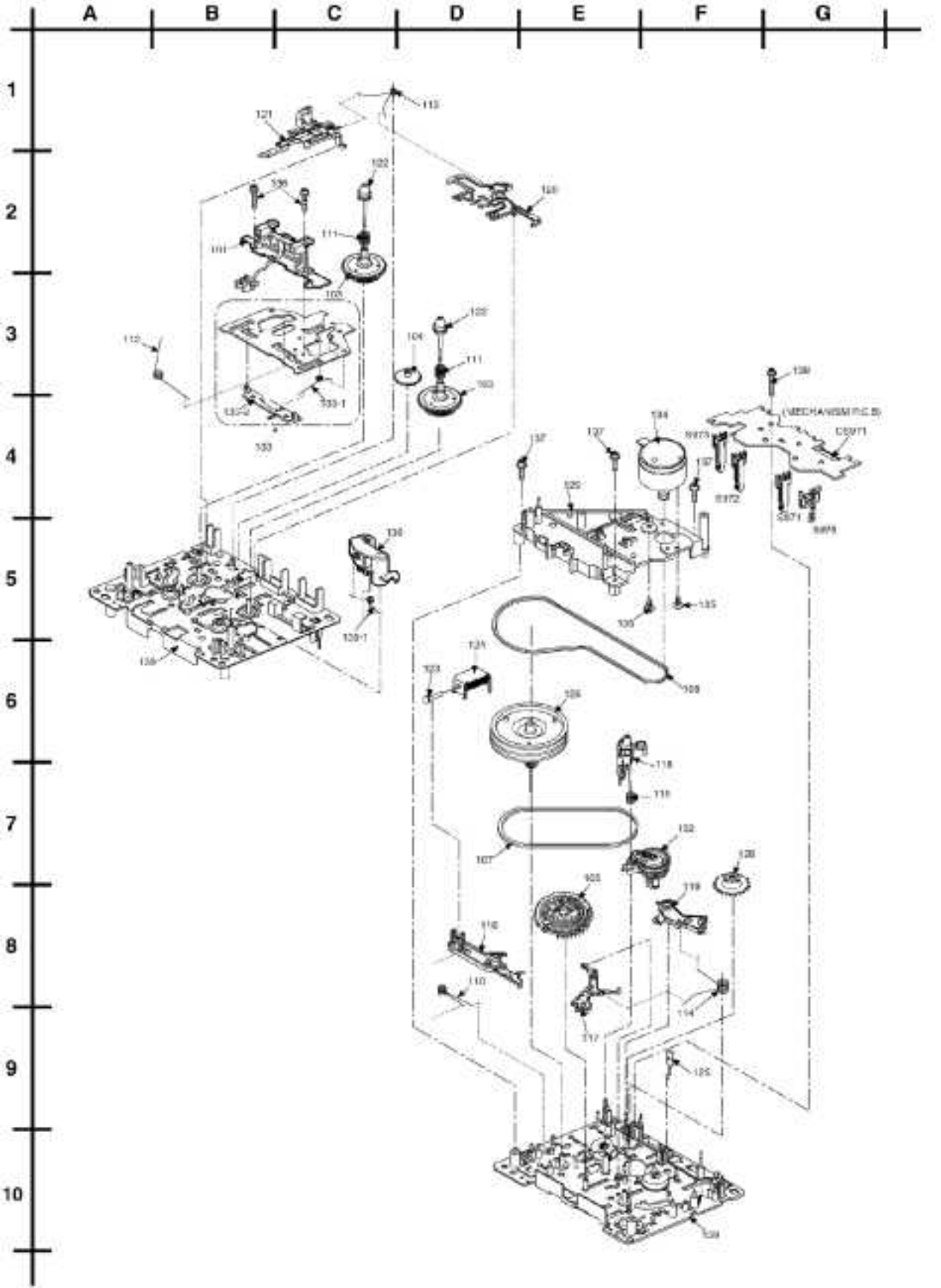
C803	ECA1HAKR22XB	0.22 50V	[M]
C1101	ECA1HAK010XB	1 50V	[M]
C1102	ECJ1VB1H471K	470P 50V	[M]
C1103	ECA1CAK101XB	100 16V	[M]
C1104	ECJ1VB1E273K	0.027 25V	[M]
C1105	ECJ1VB1H471K	470P 50V	[M]
C1106	ECA1HAK2R2XB	2.2 50V	[M]
C1107	F1H1H152A219	1500P 50V	[M]
C1108	ECA1CAK100XB	10 16V	[M]
C1109	ECA1HAK3R3XB	3.3 50V	[M]
C1110	ECJ1VB1H682K	6800P 50V	[M]
C1121	ECJ1VB1H102K	1000P 50V	[M]
C1122	ECJ1VB1E103K	0.01 25V	[M]
C1123	ECJ1VB1H271K	270P 50V	[M]
C1201	ECA1HAK010XB	1 50V	[M]
C1202	ECJ1VB1H471K	470P 50V	[M]
C1203	ECA1CAK101XB	100 16V	[M]
C1204	ECJ1VB1E273K	0.027 25V	[M]
C1205	ECJ1VB1H471K	470P 50V	[M]
C1206	ECA1HAK2R2XB	2.2 50V	[M]
C1207	F1H1H152A219	1500P 50V	[M]
C1208	ECA1CAK100XB	10 16V	[M]
C1209	ECA1HAK3R3XB	3.3 50V	[M]
C1210	ECJ1VB1H682K	6800P 50V	[M]
C1221	ECJ1VB1H102K	1000P 50V	[M]
C1222	ECJ1VB1E103K	0.01 25V	[M]
C1223	ECJ1VB1H271K	270P 50V	[M]
C1301	ECA1HAK0R1XB	0.1 50V	[M]
C1302	ECJ1VB1C333K	0.033 16V	[M]
C1303	ECJ1VB1C333K	0.033 16V	[M]
C1304	ECEA1HKA4R7B	4.7 50V	[M]
C1305	ECA1CAK330XB	33 16V	[M]
C1307	ECA1AAK221XQ	220 10V	[M]
C1308	ECA1CAK220XB	22 16V	[M]
C1310	ECA1HAK0R1XB	0.1 50V	[M]
C1311	ECA1CAK470XB	47 16V	[M]
C1312	ECJ1VB1H332K	3300P 50V	[M]
C1314	ECJ1VB1H222K	2200P 50V	[M]
C1315	ECJ1VB1H222K	2200P 50V	[M]
C1316	ECJ1VB1H102K	1000P 50V	[M]
C1317	ECJ1VB1H102K	1000P 50V	[M]
C1318	ECQV1H473JZ3	0.047 50V	[M]
C1319	ECA1CAK101XB	100 16V	[M]
C1320	ECA1HAK010XB	1 50V	[M]
C1321	F0A2A472A019	4700P 100V	[M]
C1323	ECEA1HKN010B	1 50V	[M]
C1324	ECA1CAK470XB	47 16V	[M]
C1326	ECA1CAK100XB	10 16V	[M]
C1371	ECJ1VB1E103K	0.01 25V	[M]
		CHIP JUMPER	
RJ701	ERJ3GEY0R00V	0 1/16W	[M]
RJ715	ERJ3GEY0R00V	0 1/16W	[M]
RJ716	ERJ3GEY0R00V	0 1/16W	[M]
RJ717	ERJ3GEY0R00V	0 1/16W	[M]
RJ718	ERJ3GEY0R00V	0 1/16W	[M]

RJ719	ERJ3GEY0R00V	0 1/16W	[M]
RJ720	ERJ3GEY0R00V	0 1/16W	[M]
RJ721	ERJ3GEY0R00V	0 1/16W	[M]
RJ722	ERJ3GEY0R00V	0 1/16W	[M]
RJ723	ERJ3GEY0R00V	0 1/16W	[M]
RJ724	ERJ3GEY0R00V	0 1/16W	[M]
RJ725	ERJ3GEY0R00V	0 1/16W	[M]

24.5 Packaging Materials & Accessories Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		PACKING MATERIALS	
P1	RPGV0060	PACKING CASE	[M]P
P1	RPGV0061	PACKING CASE	[M]PC
P2	RPNV0026	POLYFOAM	[M]
P3	RPHV0001	MIRAMAT SHEET	[M]
		ACCESSORIES	
A1	N2QAJB000095	REMOTE CONTROL	[M]
A1-1	RKK-HTR0051K	R/C BATTERY COVER	[M]
A2	K2CB2CB00006	AC CORD	[M] ⚠
A3	RQT7372-P	O/I BOOK (En)	[M]
A3	RQT7373-M	O/I BOOK (Sp)	[M]P
A3	RQT7374-C	O/I BOOK (Cf)	[M]PC
A4	RSA0007-L	FM ANTENNA WIRE	[M]
A5	N1DAAAA00001	AM LOOP ANTENNA	[M]

24.6 Packaging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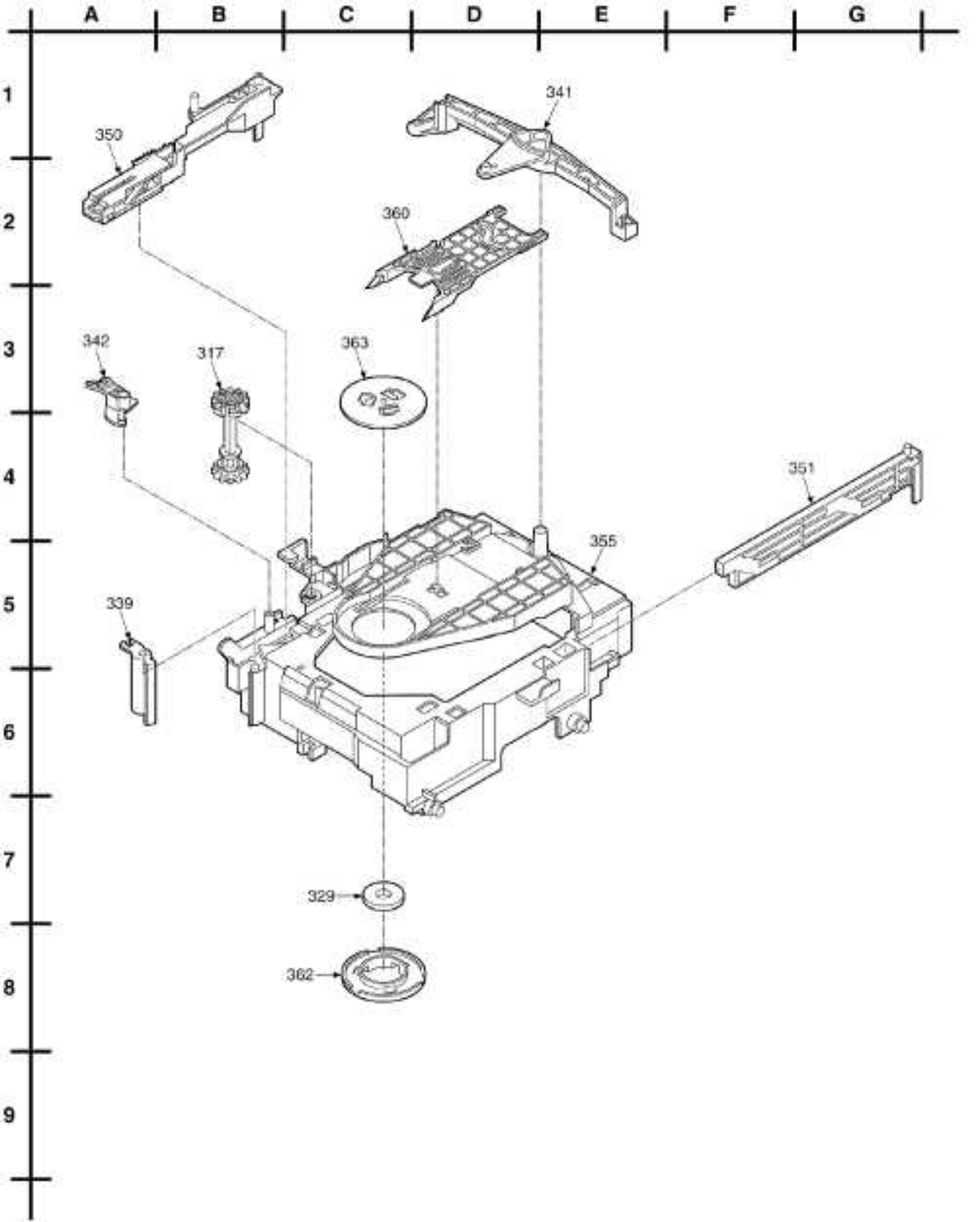
(MECHA/MSM P.C.B)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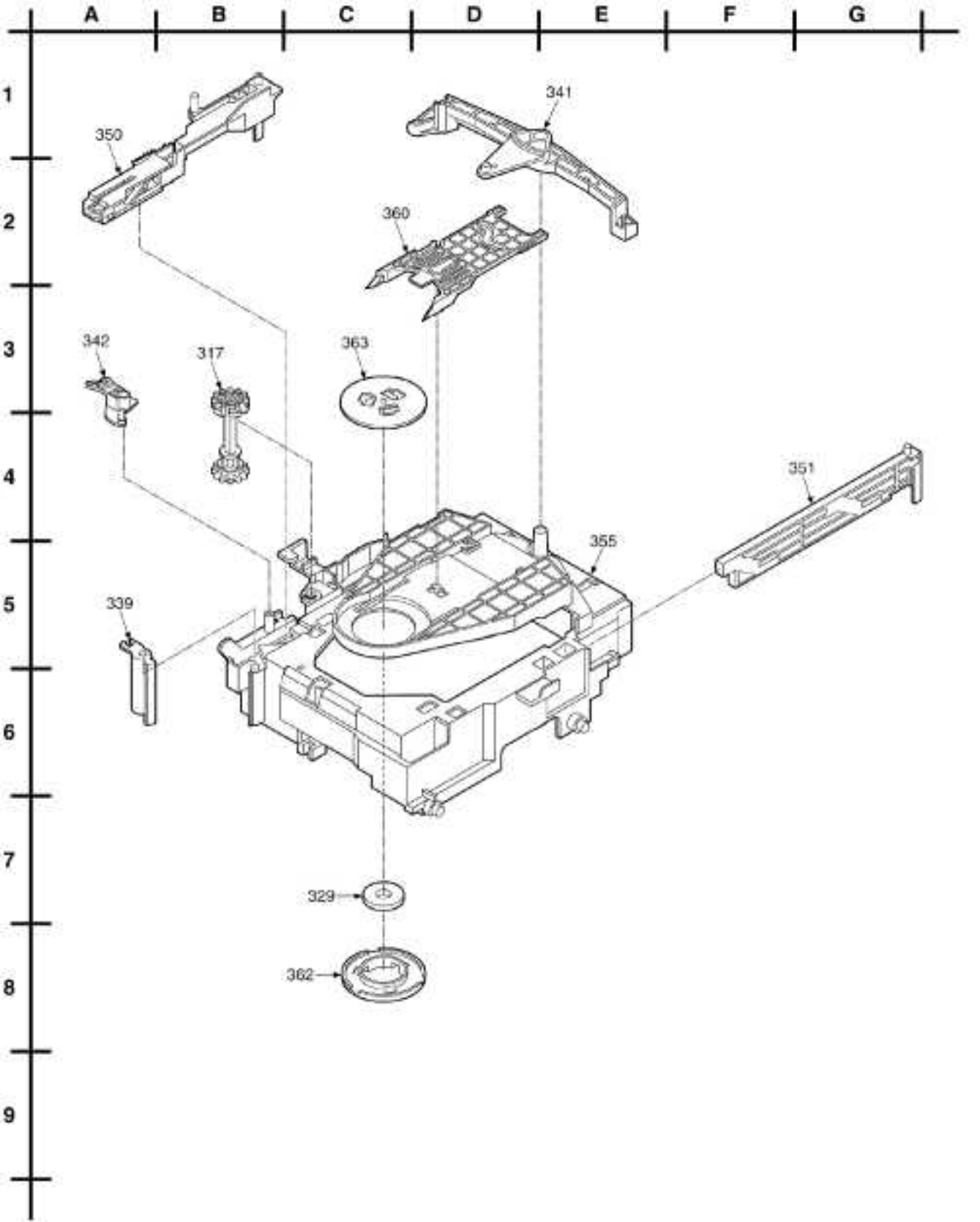
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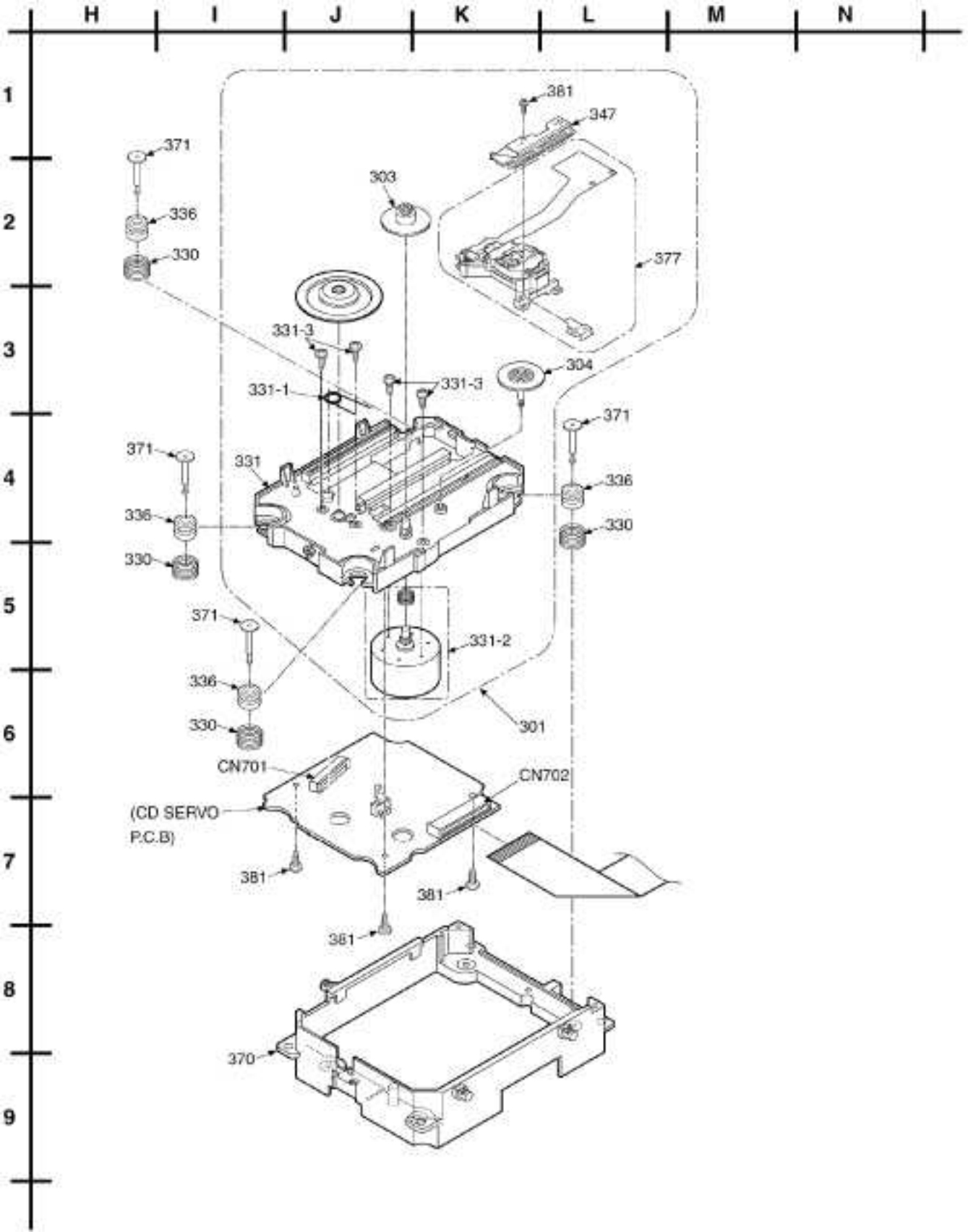
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331-3
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331-1
331-3
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331-2
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CN701
CN702
(CD SERVO
P.C.B)
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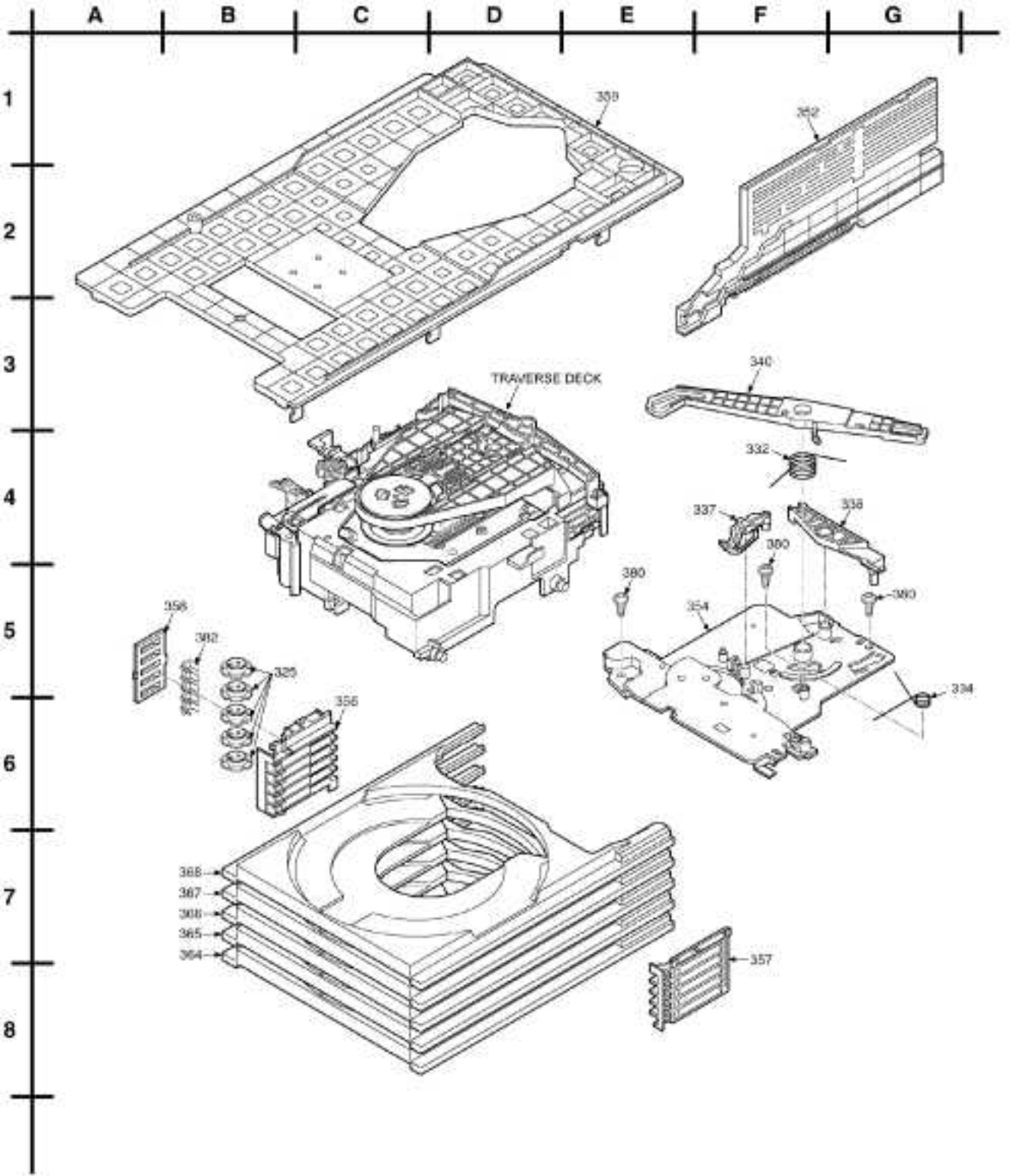
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TRAVERSE DECK
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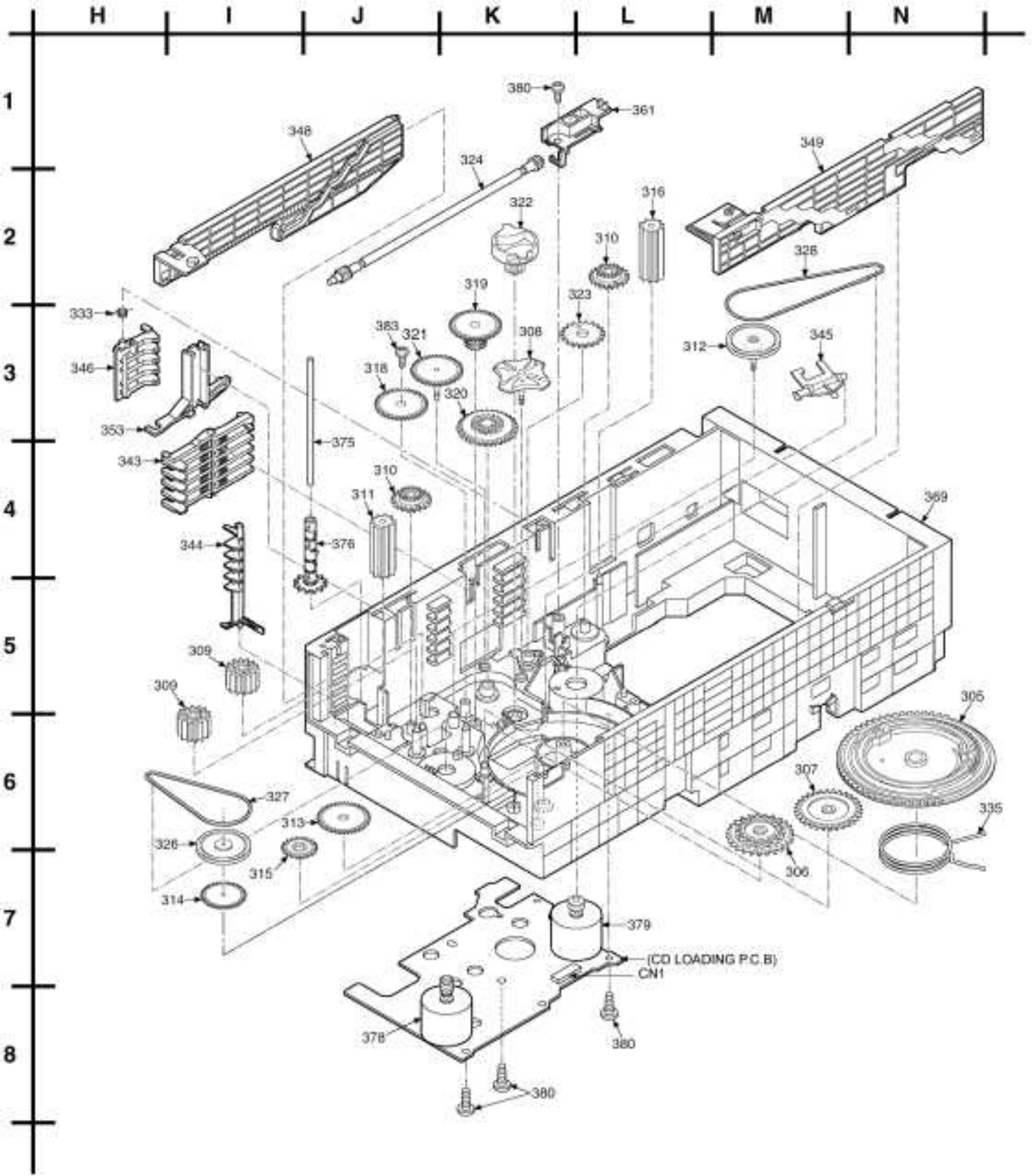
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(CD LOADING P.C.B)
CN1
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380
380

25 Additional Contents 1

25.1 Voltage Measurement

CD LOADING PCB (REP3569A)

Ref No.	IC11																			
MODE	1	2	3	4	5	6	7	8	9											
CD PLAY	8.0	0	0	0	8.0	8.0	5.0	0	5.0											
STANDBY	8.0	2.2	0	2.2	8.0	8.0	0	0.2	0											
Ref No.	IC21																			
MODE	1	2	3	4	5	6	7	8	9											
CD PLAY	8.0	0	0	0	8.0	8.0	5.0	0	5.0											
STANDBY	8.0	2.9	0	2.9	8.0	8.0	0	0.2	0											

MAIN PCB (REPV0019A)

Ref No.	IC300																				
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	4.5	4.5	4.5	4.6	4.5	4.5	4.5	4.5	4.5	4.5	4.6	0	0	9.1	4.6	4.6	4.6	4.6	-	4.6
STANDBY	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	0	0	0	9.0	4.5	4.5	4.5	4.5	4.5
Ref No.	IC300																			
MODE	21	22	23	24																
CD PLAY	-	-	-	0.8																
STANDBY	4.5	4.5	4.5	0.8																
Ref No.	IC301																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	5.0	5.0	0	0	0	0	0	1.3												
STANDBY	0	0	0	0	0	3.4	0	1.5												
Ref No.	IC302																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	5.0	5.0	5.0	5.0	5.1	0	5.0	0	0	0	0	5.1	2.5	0	-	5.1	5.1	5.0	0	3.0
STANDBY	5.0	5.0	4.9	4.9	4.9	0	4.8	0	0	1.4	0.7	4.9	1.9	0	1.7	3.8	3.8	4.8	4.9	3.0
Ref No.	IC302																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	0	0	0	4.6	4.3	5.0	5.0	5.0	5.1	5.1	0	0	0	0	5.0	1.6	5.0	5.0	5.0	0
STANDBY	4.9	0	0	4.5	4.2	3.3	3.3	3.3	4.9	1.7	0	0	0	0	0	0.3	0	0	0	4.8
Ref No.	IC302																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	0	5.0	0	0	0	0	0	0	0	0	0	5.1	0	5.1	5.0	5.0	5.0	5.1	0	5.0
STANDBY	0	0	0	0	0	0	4.9	0	4.8	0	0	5.0	0.2	5.0	0	0	0	0	0	4.8
Ref No.	IC302																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
CD PLAY	2.2	5.1	2.3	0	5.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5.0
STANDBY	2.2	4.9	2.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4.9	0
Ref No.	IC302																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
CD PLAY	0	5.1	0	0	5.0	0	0	0	2.2	2.3	0.4	5.1	5.0	5.0	5.1	2.8	5.1	5.1	5.1	5.1
STANDBY	0	5.0	0	0	4.9	4.9	0	0	2.1	2.1	0.4	5.0	3.4	5.0	2.2	0	2.2	5.0	5.0	5.0
Ref No.	IC304																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
CD PLAY	-	-	-	0	-	-	0	-	-	-	-	-	-	-	-	-				
STANDBY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				

POWER PCB (REPV00128F) E/EG (REPV0018H)EB

Ref No.	IC500																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
CD PLAY	0	30.4	-30.2	0	0	0.6	0	-14.9	0	0	0	0	0	0						
STANDBY	0	31.6	-30.2	0	0	0	0	-14.9	0	0	0	0	0	0						
Ref No.	IC501																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	0	-	-	8.8	-	-	0	9.2												
STANDBY	0	0	0	-8.7	0	0	0	9.1												
Ref No.	IC503																			
MODE	1	2	3																	
CD PLAY	7.6	0	3.4																	
STANDBY	0.4	0.4	0																	

PANEL PCB (REPV0019A)

Ref No.	IC601																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	-32.1	-32.1	-32.2	-32.2	5.1	3.9	3.8	2.1	4.9	4.9	4.9	0	4.9	0	-32.5	-32.5	-32.5	-32.5	-32.5	-32.5
STANDBY	-29.7	-29.7	-29.7	-29.7	4.9	3.4	3.3	1.7	1.5	4.5	4.8	1.9	2.7	0	-31.8	-31.8	-31.8	-31.8	-31.8	-31.8
Ref No.	IC601																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	-32.5	-32.5	-32.5	-32.7	-32.5	-32.5	-32.5	-32.5	-32.5	-32.5	-32.5	-32.5	-32.5	-32.5	-32.5	-32.5	-32.5	-32.5	-32.5	-32.5
STANDBY	-31.8	-31.8	-30.6	-32.0	-31.4	-31.8	-31.8	-31.5	-31.4	-31.5	-31.9	31.3	-30.5	-31.8	-31.3	-31.8	-30.5	-31.8	-31.8	-31.8
Ref No.	IC601																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	-32.5	-32.5	-32.5	-32.5	-32.5	-32.5	-32.5	-32.5	-32.6	-32.5	-32.5	5.0	-32.5	-32.5	-32.5	-32.5	-32.5	-32.5	-32.5	-32.5
STANDBY	-31.8	-31.8	-31.8	-31.8	-30.9	-30.9	-31.8	-31.8	-31.8	-31.8	-31.8	4.8	-31.8	-31.8	-31.7	-31.7	-31.7	-31.7	-31.7	-31.4
Ref No.	IC601																			
MODE	61	62	63	64																
CD PLAY	-32.5	-32.5	-32.5	-32.5																
STANDBY	-31.4	-31.4	-31.4	-31.4																
Ref No.	IC602																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	-30.4	-30.4	-30.4	-32.5	5.0	3.9	3.9	2.1	4.9	4.9	4.9	2.1	2.1	0	-32.4	-32.4	-32.4	-32.4	-32.4	-32.4
STANDBY	-29.8	-29.8	-29.7	-29.8	5.0	3.4	3.3	1.7	1.5	2.7	4.8	2.1	2.1	0	-31.8	-31.8	-31.8	-31.7	-31.7	-29.7
Ref No.	IC602																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	-32.4	-32.4	-32.4	-32.6	-32.4	-32.0	-32.0	-32.4	-32.4	-32.0	-32.4	-32.4	-32.4	-32.4	-31.5	-32.4	-32.4	-32.4	-31.9	-31.4
STANDBY	-31.8	-31.7	-31.7	-29.7	-31.7	-29.8	-31.7	-29.7	-31.7	-31.6	-31.7	-31.7	-31.6	-31.7	-31.8	-31.7	-31.7	-31.7	-31.7	-31.8
Ref No.	IC602																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	-32.0	-31.5	-31.5	-31.9	-32.4	-32.5	-32.5	-30.9	-32.4	-31.9	-32.4	4.9	-32.4	-32.4	-32.4	-32.4	-32.4	-32.4	-32.4	-32.1
STANDBY	-31.8	-27.7	-31.8	-29.8	-31.8	-31.8	-31.8	-23.7	-31.8	-31.8	-31.8	4.8	-29.8	-29.8	-29.8	-29.8	-29.8	-29.8	-29.8	-29.8
Ref No.	IC602																			
MODE	61	62	63	64																
CD PLAY	-32.1	-32.1	-32.1	-32.1																
STANDBY	-29.8	-29.8	-29.8	-29.8																

CD SERVO PCB (REPX0363A)

Ref No.	IC701																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	3.0	3.4	0	0	1.7	1.4	0.5	1.4	1.6	1.6	1.1	0	0.5	3.2	0	0	1.7	1.7	1.7
STANDBY	0.2	-0.1	0.1	0.2	0.1	0.1	0	0.2	0	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1
Ref No.	IC701																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32								
CD PLAY	1.7	1.7	0	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7								
STANDBY	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2								
Ref No.	IC702																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	3.4	0	0	0	3.4	0	0	3.4	0	0	0	0	0	0	0	0	0	0	0	0
STANDBY	0.1	0.2	0.2	0.2	0.2	0.2	0.2	3.4	3.4	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Ref No.	IC702																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	1.6	1.7	1.7	3.4	1.7	0	0	0	3.4	1.7	1.7	1.7	1.7	1.6	0.5	3.2	0	0	1.7	0.9
STANDBY	2.4	2.1	2.1	3.4	2.1	0.8	2.1	0.8	3.4	2.1	2.1	2.1	2.2	2.1	1.2	3.2	0.8	0.8	0.9	1.7
Ref No.	IC702																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	1.6	1.7	1.7	1.1	1.1	3.4	0	1.6	0	1.6	3.1	0	1.6	0	3.3	0	0	0	3.4	0
STANDBY	2.4	0.9	0.9	0.7	0.7	3.4	0.8	2.1	1.0	2.1	3.3	0.8	2.4	3.4	0.8	0.8	0.8	0.8	3.4	0.8
Ref No.	IC702																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
CD PLAY	3.4	0	3.4	0.1	3.4	0	0	0	3.4	0	0	0	0	0	3.4	1.7	1.7	0	1.6	3.3
STANDBY	3.4	3.4	3.4	0.8	3.4	2.1	0.8	0.8	0.4	0.8	2.1	0.8	0.8	2.0	3.4	2.1	2.0	0.8	2.4	3.4
Ref No.	IC703																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	1.7	0	1.7	3.4	-	-	-	-	0	8.0	4.1	4.1	3.7	3.7	3.7	3.7	3.7	3.7	8.0	0
STANDBY	2.1	0.8	2.1	3.4	-	-	-	0.8	-	0	8.0	4.1	4.1	3.7	3.7	3.7	3.7	3.7	8.0	0
Ref No.	IC703																			
MODE	21	22	23	24	25	26	27	28												
CD PLAY	8.0	-	-	-	-	8.0	1.7	1.7												
STANDBY	0	0.2	-	-	-	0.3	0.1	0.1												
Ref No.	IC704																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STANDBY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ref No.	IC704																			
MODE	21	22	23	24	25	26														
CD PLAY	-	-	-	-	-	-														
STANDBY	-	-	-	-	-	-														

DECK MECHANISM PCB (REPX0321C)

Ref No.	IC971																			
MODE	1	2	3	4																
CD PLAY	5.0	5.1	3.9	5.1																
STANDBY	4.9	5.0	3.8	5.0																

DECK PCB (REPX0411A)

Ref No.	IC1000																			
MODE	1	2	3	4	5															
CD PLAY	6.1	0	0	0	0															
STANDBY	6.2	0	0	0	0															
Ref No.	IC1001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	-	0.7	4.6	3.7	0	2.8	0	-	0.1	5.6	0	8	0	0	-	0	3.1	0.2	3.7	4.5
STANDBY	0.1	0.7	5.2	4.4	0	5.0	0	0	0.1	6.1	0	9.0	0	0	0	0	3.7	0.2	4.3	5.1
Ref No.	IC1001																			
MODE	21	22																		
CD PLAY	0.7	-																		
STANDBY	0.7	0.1																		

CD LOADING PCB (REP3569A)

Ref No.	Q1																			
MODE	E	C	B																	
CD PLAY	-	-	-																	
STANDBY	-	-	-																	

MAIN PCB (REPV0019A)

Ref No.	Q200				Q201				Q222				Q223				Q224			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	4.3	4.1	0		8.7	9.4	9.4		0	0	0.8		0	0	0.8		0	0	0.8	
STANDBY	4.2	4.1	0		8.4	9.3	9.2		0	0	0.8		0	0	0.8		0	0	0.8	
Ref No.	Q301				Q302				Q303				Q304				Q305			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	5.1	5.1	4.4		0	0	4.9		5.1	5.1	4.4		0	1.7	1.1		0	0.5	0	
STANDBY	5.1	5.0	4.3		0	0.1	4.9		5.1	5.0	4.3		0	0.1	0		0	5.0	0	
Ref No.	Q306				Q307				Q308				Q309				Q310			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	5.1	0		0	0	0.7		0	2.3	0		0	3.1	0		0	3.2	0	
STANDBY	0	3.3	0		0	0	0.7		0	3.8	0		0	3.1	0		0	3.2	0	
Ref No.	Q390				Q400				Q422				Q423				Q424			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	-	-	-		4.6	4.5	0		0	0	0.8		0	0	0.8		0	0	0.8	
STANDBY	-	-	-		4.5	4.4	0		0	0	0.8		0	0	0.8		0	0	0.8	

POWER PCB (REPV0018F) E/EG (REPV0018H) EB

Ref No.	Q501				Q502				Q505				Q506				Q508			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	9.2	12.1	9.8		12.1	10.3	11.5		0	-9.4	-0.6		-8.9	-29.9	-9.4		9.6	11.5	9.9	
STANDBY	9.0	12.4	9.7		12.5	10.2	11.7		0	-9.3	-0.6		-8.7	-29.0	-9.3		9.5	11.9	9.9	
Ref No.	Q509				Q514				Q515				Q516				Q517			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	12.7	13.4	13.3		9.5	12.4	10.1		0.1	5.0	0		0	5.0	0.1		4.9	8.0	5.6	
STANDBY	11.8	12.7	12.6		9.3	12.7	9.9		0.1	5.0	0		0	5.0	0.1		4.9	8.0	5.6	
Ref No.	Q519				Q520															
MODE	E	C	B		E	C	B													
CD PLAY	0	3.5	-0.5		8.1	10.3	8.7													
STANDBY	0	3.4	-0.5		8.0	10.2	8.6													

TRANSFORMER PCB (REPV0018H EB)

Ref No.	Q575				Q577				Q578				Q579							
MODE	E	C	B		E	C	B		E	C	B		E	C	B					
CD PLAY	0	0	0.7		6.0	8.3	6.7		0	3.3	0		-32.3	-40.0	-33.0					
STANDBY	0	0	0.7		5.9	8.1	6.6		0	3.0	-0.3		-31.9	-39.0	-32.0					

TACT SWITCH PCB (REPV0019A)

Ref No.	Q600				Q601				Q602				Q603							
MODE	E	C	B		E	C	B		E	C	B		E	C	B					
CD PLAY	0	0.1	4.9		0	7.7	0		0	0.1	4.9		0	0.1	4.9					
STANDBY	0	2.3	0		0	2.4	0		0	0	4.6		4.8	0	0					

PANEL PCB (REPV0019A)

Ref No.	Q604																			
MODE	E	C	B																	
CD PLAY	-30.1	4.9	-30.3																	
STANDBY	-29.6	4.8	-29.8																	

POWER PCB (REPV0018F) E/EG (REPV0018H) EB

Ref No.	Q700				Q701				Q702				Q703				Q704			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	5.0	0.1		3.4	0.9	2.9		0	10.3	0		0	5.0	0		1.5	1.2	0	
STANDBY	0	0	0.3		10.2	0	10.2		0	10.2	0		0	5.0	0		1.5	1.2	0	
Ref No.	Q710				Q711				Q714				Q715				Q716			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	0	-5.9		0	0	-5.9		-1.5	-	-0.9		-1.4	9.1	-0.7		-0.7	9.2	-0.1	
STANDBY	0	0	0.7		0	0	0.7		-1.5	9.1	-0.9		-1.6	9.1	-0.9		-0.7	9.1	-0.1	
Ref No.	Q717				Q718				Q719				Q720				Q721			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	-0.7	9.2	-0.1		0	0	0.7		0	0	5.9		0	0	0		0	0	0	
STANDBY	-0.7	9.1	-0.1		0	0	0.7		0	0	0.7		0	0	0		0	0	0	
Ref No.	Q722				Q723				Q724				Q725				Q726			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	4.9	0.3	5.0		8.0	0.5	8.0		4.3	6.9	4.9		-	-	-		-	-	-	
STANDBY	4.9	4.9	0.1		7.8	7.8	7.0		4.2	6.9	4.9		-	-	-		-	-	-	

DECK PCB (REPX0411A)

Ref No.	Q1101				Q1201				Q1302				Q1303				Q1304			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	0	0		0	0	0		0	0	0		0	6.1	0		6.1	0.1	6.1	
STANDBY	0	0	0.7		0	0	0.7		1.5	1.4	0		0	6.2	0		6.2	0.1	6.2	
Ref No.	Q1306				Q1307				Q1309				Q1310				Q1312			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	-	-	-		-	-	-		0	8.9	0.1		0	8.9	0.1		0	0.1	0	
STANDBY	-	-	-		-	-	-		0	9.0	0.1		0	9.0	0.1		0	0.1	0	
Ref No.	Q1314				Q1315				Q1316				Q1317							
MODE	E	C	B		E	C	B		E	C	B		E	C	B					
CD PLAY	6.1	0.1	6.1		10.0	0	10.0		0	0.1	0.8		0	0	0.1					
STANDBY	10.0	-2.0	10.0		10.0	0	10.0		0	9.3	-1.5		0	0	0.1					

26 Additional Contents 2

26.1 Self-Diagnostic Display Function (Corrections)

With reference to Original Service Manual on page 52~54 (Section 13.5.3)(SA-PM29P/PC-S).
With reference to Original Service Manual on page 53~55 (Section 13.5.3)(SA-PM29E/EB/EG-S)
With reference to Original Service Manual on page 50~52 (Section 12.5.3)(SA-PM29GN/GD-S)

26.1.1 Doctor Mode set up (Corrections)

1. Turn on power for unit.
2. Select CD Mode. Ensure no disc is inserted in the unit.
3. Press & hold [STOP] button for at least 2 seconds, follow by [4] & [7] on remote control. It enters into doctor mode.
4. Power down to exit by pressing [POWER] button on main unit.

26.1.2 CR16 Mechanism Ageing Mode (Additional)

To enter into ageing mode :

1. Enter self-diagnostic mode. (Doctor Mode)
2. Press [3] button on remote control. It enters into ageing mode. (See below for ageing process)

Ageing process

1. Tray 1 open.
2. It waits for one second (Note : Do not put any disc into the tray)
3. Tray 1 close.
4. TOC READ (Reading incomplete)
5. Tray 2 open & repeat process 1 to 4. (Process repeat until Tray 5)
6. Tray check.
7. Whole process complete (Counter on FL increase by 1)

Note : To exit ageing mode, press [POWER] button. The unit will power down. Do not unplug the power cord until FL display shows " GOODBYE ". This is to avoid tray jam problem.

Display Example : [0 0 0 0 0 T 3 O P] ...TRAY OPEN
[0 0 0 0 0 T 3 C L] ...TRAY CLOSE
[0 0 0 0 0 T 3 R E] ...TOC READING
[0 0 0 0 0 T 3 C H] ...TRAY CHANGING